



# STIC Search Report

EIC 1700

STIC Database Tracking Number: 137266

**TO:** Jerry Redman  
**Location:**  
Art Unit : 3634  
November 17, 2004

**Case Serial Number:** 10/664052

**From:** Kathleen Fuller  
**Location:** EIC 1700  
REMSEN 4B28  
**Phone:** 571/272-2505  
**Kathleen.Fuller@uspto.gov**

## Search Notes



# STIC EIC 3600

## Search Request Form

Today's Date:

11/8/2004

What date would you like to use to limit the search? For 705 list subclass

Access # 137266

Name Jerry Redman  
AU 3634 Examiner # \_\_\_\_\_  
Room # PK5 6403 Phone \_\_\_\_\_  
Serial # 10/664,052

Format for Search Results (Circle One):

PAPER      DISK      EMAIL

Where have you searched so far?

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IEEE INSPEC SPI Other \_\_\_\_\_

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What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

Focus on revised Claim 7. (Page 4)

Thanks.

STIC Searcher \_\_\_\_\_ Phone \_\_\_\_\_

Date picked up \_\_\_\_\_ Date Completed \_\_\_\_\_



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=> D QUE L41

L31 642 SEA FILE=HCAPLUS ABB=ON (?URETHAN? OR ISOCYANAT?) AND ROOF?  
L35 526 SEA FILE=WPIX ABB=ON L31 AND ADHESIVE?  
L36 22 SEA FILE=WPIX ABB=ON L35 AND CATALYST?  
L38 4 SEA FILE=WPIX ABB=ON L36 AND (E04B? OR E04D?)/IC  
L39 11 SEA FILE=WPIX ABB=ON L36 AND ROOFING?  
L40 1 SEA FILE=WPIX ABB=ON L35 AND ?SULFONYL?(3A)?ISOCYANAT?  
L41 13 SEA FILE=WPIX ABB=ON (L38 OR L39 OR L40)

=> D L41 1-13 FULL

L41 ANSWER 1 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN  
AN 2003-077373 [08] WPIX  
DNC C2003-020188  
TI Colloid composition for coating on fabrics and ceramics, contains  
amphiphilic star polymer having potentially cross-linkable site chosen  
from sterically hindered silane monomer and acetoacetoxy-containing  
monomer.  
DC A14 A82 F02 G02  
IN FARWAHA, R; MUKHERJEE, A; PHAN, L; THOMAIDES, J S  
PA (NATT) NAT STARCH & CHEM INVESTMENT HOLDING COR  
CYC 28  
PI EP 1219650 A2 20020703 (200308)\* EN 15 C08F230-08  
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI TR  
CN 1362427 A 20020807 (200308) C08F220-14  
US 6420479 B1 20020716 (200308) C08L043-04  
ADT EP 1219650 A2 EP 2001-129243 20011211; CN 1362427 A CN 2001-130283

20011229; US 6420479 B1 US 2000-752897 20001229

PRAI US 2000-752897 20001229

IC ICM C08F220-14; C08F230-08; C08L043-04

ICS C08F002-24; C08F220-28; C09D133-12; C09D157-00

AB EP 1219650 A UPTX: 20030204

NOVELTY - Colloid composition contains amphiphilic star polymer having potentially cross-linkable site(s). The cross-linkable site is sterically hindered silane monomer and acetoacetoxy-containing monomer. When the cross-linkable site is silane monomer, the star polymer contains internal **catalyst**, and when the cross-linkable site is acetoacetoxy group, the colloid composition contains non-polymeric polyfunctional amine.

DETAILED DESCRIPTION - A colloid composition contains an amphiphilic star polymer having potentially cross-linkable site(s) on the polymer backbone. The potentially cross-linkable site is chosen from a sterically hindered silane monomer and an acetoacetoxy-containing monomer. When the cross-linkable site is a sterically hindered silane monomer, the star polymer contains an internal **catalyst**, and when the cross-linkable site is acetoacetoxy group, the colloid composition contains a non-polymeric polyfunctional amine.

INDEPENDENT CLAIMS are included for the following:

(1) Emulsion composition containing above colloid composition and an emulsion polymer; and

(2) One-part coating composition containing above emulsion composition.

USE - For coating compositions including high-gloss, semi-gloss and low odor paints, and pressure sensitive **adhesives**, which are applied to various materials such as wood, cement, concrete, leather, woven or non-woven fabric, aluminum or other metals, glass, ceramics, glazed or unglazed tiles, polyvinyl chloride, polyethylene terephthalate, other plastics, plaster, stucco, **roofing** substrates such as asphaltic coatings, **roofing** felts, synthetic polymer membranes, and foamed **polyurethane** insulation; and also applied to painted, primed, undercoated, worn or weathered substrates.

ADVANTAGE - The colloid composition has latent cross-linkable functionality, and provides improved mechanical properties, film strength, block resistance, wet adhesion and abrasion resistance to coating compositions. Since the reactive groups on the star polymer colloid are so hindered, a reaction occurs only after the reactive groups are forced into very close proximity - a condition which occurs after coalescence of the emulsion particles, thereby avoiding weak bond and weak coating film. The colloid composition migrates into and intermingles with other polymer chains prior to formation of cross-links, which leads to much stronger, more cohesive bond and water-resistant film.

Dwg. 0/0

TECH EP 1219650 A2 UPTX: 20030204

TECHNOLOGY FOCUS - POLYMERS - Preferred Compounds: The amphiphilic star polymer is a heteroarm star polymer or random star polymer. The sterically hindered silane monomer is vinyltriisopropoxy silane, present in an amount of 1-20 parts per hundred monomer (ppm). The internal **catalyst** is ethylenically unsaturated carboxy functional monomer, present in an amount of 0.1-10 ppm. The acetoacetoxy containing monomer is chosen from acetoacetoxy ethyl methacrylate, acetoacetoxy butyl methacrylate, acrylamido methylacetyl acetone, allyl acetoacetate and/or vinyl acetoacetate.

Preferred Properties: The star polymer has a molecular weight of 10,000-100,000, preferably 30,000-50,000. The star polymer has at least one arm with a glass transition temperature of 20 degrees C or more.

Preferred Emulsion: The emulsion composition contains 5-20 ppm of the colloid composition. The emulsion polymer contains a polymer formed from

ethylenically unsaturated monomer(s) having reactive molecule, preferably acrylic monomer and/or vinyl monomer. The emulsion is surfactant-free, and contains a wet adhesion monomer as a part of either the star polymer or emulsion polymer.

ABEX EP 1219650 A2 UPTX: 20030204

EXAMPLE - A random star polymer was prepared (in parts per hundred monomer, ppm) as follows. Isopropyl alcohol (100) and a monomer mixture comprising vinylisopropoxysilane (3), methacrylic acid (7), methylmethacrylate (90) and pentaerythritol tetrakis(3-mercaptopropionate) (6.5), was taken in a reactor with agitation of 100 rpm. The reactor was heated to 75 degrees C with stirring under atmospheric nitrogen. Azobisisobutyronitrile (0.5) was added into the reactor as catalyst. The reactants were polymerized under reflux (83 degrees C) for 2 hours. The reaction mixture was cooled and aqueous ammonium hydroxide (6) was added and stirred for 30 minutes. Subsequently, isopropyl alcohol was removed and water (300) was added to form a stable colloid. The end polymer pH was adjusted to 9.5 using aqueous ammonium hydroxide. The physical properties of the polymer were evaluated. The percentage of solid content, Brookfield viscosity, particle size, surface tension and theoretical molecular weight of the polymer were found to be 14%, 25 cps, 104 nm, 38 dyn/cm and 30,000, respectively. An aqueous emulsion polymer was prepared as follows. Water (34.8) was added to a reactor with agitation of 100 rpm. The reactor was heated to 78 degrees C. A monomer mixture comprising water (30.2), above prepared polymer (7), butyl acrylate (50) and methylmethacrylate (50), was added for 4 hours, along with a catalyst solution comprising water (10.2) and ammonium persulfate (0.26). The reaction was carried out at 78 degrees C for 30 minutes. Tertiary butyl hydroperoxide (0.6 g) in water (5 g) and sodium formaldehyde sulfoxylate (0.3 g), were then added. The pH of the emulsion polymer was adjusted to 8.5. The emulsion polymer was found to have solid content of 48.73%, viscosity of 178 cps, particle size of 131 nm, minimum film formation temperature of 7.2 degrees C and glass transition point of 20.7 degrees C. Gloss paint prepared using the emulsion polymer was found to have scrub resistance of 5150 cycles, and exhibited significant improvement in abrasion resistance.

FS CPI

FA AB

MC CPI: A12-B01A; F03-C; F03-E01; G02-A01; G02-A02

L41 ANSWER 2 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 2002-351536 [38] WPIX

DNC C2002-099789

TI Polyurethane or hybrid polyurethane-polymer dispersion with reduced hydrophilicity, used e.g. in binders for coating systems, contains a polyurethane component based on hydrophobically-modified polyol.

DC A25 A81 A82 A93 G02 G03 G04 Q43 Q46

IN KERN, A; MAIER, A; REICHEL, F; REUSMANN, G; STEIDL, N; WOLFERTSTETTER, F  
 PA (SUDD) SKW BAUWERKSTOFFE DEUT GMBH; (KERN-I) KERN A; (MAIE-I) MAIER A;  
 (REIC-I) REICHEL F; (REUS-I) REUSMANN G; (STEI-I) STEIDL N; (WOLF-I)  
 WOLFERTSTETTER F; (RASM-I) RASMUSSEN P

CYC 21

PI WO 2002012364 A2 20020214 (200238)\* GE 54 C08G018-00  
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

W: US

DE 10038941 A1 20020328 (200238) C09D005-02

DE 10038941 C2 20020814 (200255) C09D005-02

EP 1313784 A2 20030528 (200336) GE C08G018-48

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

US 2003187136 A1 20031002 (200365) C08L051-08

ADT WO 2002012364 A2 WO 2001-EP9135 20010807; DE 10038941 A1 DE 2000-10038941 20000809; DE 10038941 C2 DE 2000-10038941 20000809; EP 1313784 A2 EP 2001-967241 20010807, WO 2001-EP9135 20010807; US 2003187136 A1 WO 2001-EP9135 20010807, US 2002-220089 20021126

FDT EP 1313784 A2 Based on WO 2002012364

PRAI DE 2000-10038941 20000809

IC ICM C08G018-00; C08G018-48; C08L051-08; C09D005-02

ICS C04B024-28; C08G018-08; C08G018-10; C09D005-12; C09D005-34; C09D175-04; C09D175-08; C09J175-04; E04B001-62; E04G023-02

AB WO 200212364 A UPAB: 20020618

NOVELTY - **Polyurethane** (PUR) or hybrid PUR-polymer dispersion with reduced hydrophilicity, based on hydrophobically-modified polyol(s) comprising block copolymers of propylene oxide (PPO) with hydrophobic polymers, block copolymers of two or more hydrophobic alkylene oxides and/or statistical copolymers of PPO with hydrophobic alkylene oxides.

DETAILED DESCRIPTION - **Polyurethane** or hybrid

**Polyurethane**-polymer dispersions with reduced hydrophilicity, obtained by reacting (parts by weight):

(a) hydrophobically modified block copolymer (A)(i) (50-100) with 2 or more hydroxyl groups and a mol. weight of 500-6000 comprising 10-90 wt% polymer with hydrophobic properties and 90-10 wt% polypropylene oxide polymer and/or hydrophobic block copolymer (A)(ii) (50-100) with similar properties comprising two or more hydrophobic alkylene oxides and/or hydrophobically modified statistical copolymer (A)(iii) (50-100) with similar properties comprising 10-90 weight% hydrophobic alkylene oxide combined with a suitable starter molecule and 90-10 weight% propylene oxide;

(b) a polyol component (B) (14-140) containing (b1) low molecular weight, anionic polyol component (B)(i) with a molecular weight of 100-1000, containing two or more OH groups and one or more carboxylic and/or sulfonic acid groups which are unreactive towards polyisocyanates (2-20); optionally (b2) low molecular weight polyol (B)(ii) with 2 or more OH groups and a molecular weight of 50-499 (2-20); and optionally (b3) other polymeric polyol (B)(iii) with 2 or more OH groups and a molecular weight of 500-6000 (10-100);

(c) polyisocyanate component (C) (25-250) comprising at least one polyisocyanate (or derivative or homologue) with 2 or more aliphatic and/or aromatic NCO groups;

(d) neutralizing agent (D) (2-20);

(e) chain extender (E) (3-30); and

(f) water (100-5000), to give a solvent-free or low-solvent

**Polyurethane** dispersion, and then optionally reacting with

(g) monomer(s) (F) with radically polymerizable double bond(s)

(117.5-3200); and

(h) lipophilic radical initiator(s) (G) (0.5-50) with thermally labile azo or peroxide group(s), to give a hybrid dispersion.

An INDEPENDENT CLAIM is also included for a method for the production of these dispersions by:

(a) (a1) reacting components (A), (B)(ii), (B)(iii) and (C), optionally in presence of a **catalyst**, to give a **Polyurethane** pre-adduct and/or making a premix of components (A) and (B);

(b) (a2) reacting the pre-adduct with component (B)(i) and/or the premix with component (C) to give a **Polyurethane** prepolymer;

(c) (a3) neutralizing the prepolymer with (D) before and/or during dispersion in water;

(d) (a4) chain-extending with component (E); and then optionally

(e) (b1) mixing with components (F) and (G) (optionally after diluting with water); and

(f) (b2) polymerizing (F) by thermal decomposition of (G).

USE - In one- or two-component formulations (e.g. with the polyurethane-(hybrid) dispersion as binder and water-emulsifiable polyisocyanates as hardener) for use as binders in formulations for coating sports floors and tennis courts (in the form of (a) binders for elastic layers containing rubber granules or fibres and optionally additives, (b) bonding agents or primers for the sports floor coatings, (c) spray coatings, optionally with structural fillers, for use on elastic or rigid bases, (d) flow coatings for elastic or rigid bases, (e) knifing fillers for the elimination of pores in elastic or rigid bases, (f) adhesives for bonding prefabricated elastic layers, (g) optionally pigmented seals and (h) lining paint), as binders in crack-bridging coating systems (in the form of (a) base, floating or top coats and spray coatings or seals on preferably primed building surfaces, (b) optionally fireproofed roof coatings or paints and (c) optionally fireproofed seals for use in open-cast or deep mining works), as binders for coatings, sealants, printing ink, paint and varnish, primers, adhesives, membranes for the surfaces of mineral building materials (e.g. concrete, plaster, ceramic, clay and cement) and for glass, rubber, wood, timber products, plastics, metal, paper and composites, as binders for coating hydraulic binders, as binders for the coating of real or artificial leather, paper and cardboard boxes and for the production of artificial leather (claimed).

ADVANTAGE - Polyurethane or polyurethane-polymer hybrid dispersions with reduced hydrophilicity (relatively low water absorption) and generally good usage properties, which can be produced in accordance with current environmental, economical and physiological requirements.

Dwg.0/0

TECH WO 200212364 A2UPTX: 20020618

TECHNOLOGY FOCUS - POLYMERS - Preferred Components: Hydrolytically-stable block copolymers with the structure ABA, BAB or (AB)<sub>n</sub> (component (A)(i)) and A<sub>1</sub>A<sub>2</sub>A<sub>3</sub> or (A<sub>1</sub>A<sub>2</sub>)<sub>n</sub>, in which

A/A<sub>1</sub>/A<sub>2</sub>/A<sub>3</sub> = polymer segments with hydrophobic properties;

B = segments based on polypropylene oxide (PPO)

Preferred A/A<sub>1</sub>/A<sub>2</sub>/A<sub>3</sub> are polybutylene oxide (PBO), polydodecylene oxide, polyisoamylene oxide, optionally substituted polyoxetane, poly-alpha-pinene oxide, polystyrene oxide (PSO), polytetramethylene oxide (PTMO), other aliphatic or aromatic polyoxyalkylenes with 4-30C alkylene oxide units, alpha,omega-polymethacrylate-diols, alpha,omega-dihydroxyalkyl-polydimethylsiloxanes, macromonomers, telechels or mixtures of these. Preferred (A)(i) comprises PPO-PBO-PPO, PPO-PSO-PPO, PPO-PTMO-PPO, PBO-PPO-PBO and/or PSO-PPO-PSO block copolymers and (A)(ii) comprises PBO-PTMO-PBO block copolymers, with molecular weights of 1000-3000 and consisting of 10-90 wt.% PBO and/or PSO and/or PTMO and 90-10 wt.% PPO. Preferred (A)(iii) are hydrolytically stable statistical copolymers of propylene oxide (PO) and hydrophobic alkylene oxide(s) (especially butylene oxide (BO), dodecylene oxide (DDO), isoamylene oxide (IAMO), optionally substituted oxetane, alpha-pinene oxide (APO), styrene oxide (SO) and/or other 4-30C alkylene oxides), preferably BO/PO, DDO/PO, IAMO/PO, APO/PO and/or SO/PO copolymers, with molecular weights of 1000-3000 and containing 90-10 wt.% PO and 10-90 wt.% other alkylene oxide. Components (A)(i), (A)(ii) and (A)(iii) may also contain segments based on polyalkylene oxides containing Bisphenol A and/or other hydrophobic starter molecules. Component (B)(iii) comprises polyols such as polyalkylene glycols, polyesters, polycaprolactones, polycarbonates, alpha,omega-polymethacrylate-diols, alpha,omega-dihydroxy-alkyl-polydimethylsiloxanes, macromonomers, telechels and/or OH-functional epoxy resins.

Preferred Composition: The NCO/OH equivalent ratio of components (A), (B)

and (C) is adjusted to 1.25-2.5, preferably 1.4-2.0. The amount of (D) is such that the degree of neutralization (based on free acid groups in the prepolymer) is 70-100 (preferably 90-100) equivalent% and the amount of (E) is such that the degree of chain extension (based on free NCO groups in the prepolymer) is 50-100 (preferably 70-80) equivalent%. The initiator/monomer mol ratio (F and G) = 0.001-0.05. The content of carboxylate and/or sulfonate groups in the polyurethane polymer from (A)-(E) is adjusted to 10-50 (preferably 15-45) meq/100 g and the acid number to 5-30 (preferably 10-25) meq KOH/g; in the hybrid polymer from (A)-(G), these values are 5-25 (preferably 10-20) meq/100 g and 2.5-15 (preferably 5-12.5) meq KOH/g respectively. The polymer dispersions from (A)-(E) and from (A)-(G) have solid contents in the range 30-70 (preferably 40-60) wt.% and the solid content ratio (wt.%) of polyurethane resin (A-E) and polymer resin (F/G) in the hybrid dispersion is (20:80)-(80:20), preferably (40:60)-(60:40). The dispersions contain less than 10 wt.% organic solvent and the micelles in the dispersions show an average particle size of 50-500 (preferably 100-400) nm; the polymers in these dispersions show a number-average mol. wt. of 50000-500000. The pure binder (A-E) or (A-G) when coated at the rate of 0.8 kg/m<sup>2</sup> and dried for 7 days at 23degreesC and 50% RH, shows a water absorption of 0.25-25 wt.% after 7 days in water at 23degreesC. Preferred Method: Stages (a1) and (a2) are performed at 60-120 (preferably 80-100) degreesC, stage (a3) at 40-60degreesC, stage (a4) at 30-50degreesC and stage (b1) at 15-35 (preferably 20-30) degreesC. Stage (b2) is carried out with a temperature difference of +/- 10degreesC based on the temperature at which (G) shows a half life of 1 hour, preferably at 80 +/- 10degreesC if 2,2'-azobis-isobutyronitrile (AIBN) is used as (G); no other emulsifier is used in stage (b2). After stage (a4), any remaining free NCO groups may be completely chain-extended with water.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: (B)(i) is a bis-hydroxyalkane-carboxylic acid, preferably dimethylolpropionic acid. (F) is (meth)acrylic acid and/or styrene and/or derivatives of these. (G) is a radical initiator with a half-life of 1 hour at 40-120degreesC, preferably AIBN.

ABEX WO 200212364 A2UPTX: 20020618

EXAMPLE - A mixture of 0.2 g 1,4-butanediol and 16.8 g 50% aqueous potassium hydroxide was distilled at 120degreesC to remove water, cooled to 115degreesC, treated over 1.5 hours with 1000 g 1,2-butylene oxide, reacted for a further 2.5 hours, treated with 1410 g propylene oxide at not above 120degreesC and 2.5 bar, reacted to completion at 115degreesC and vacuum-distilled at 80-90degreesC to remove residual monomers. The product was neutralized with phosphoric acid and worked up by distillation and filtration, to give a block copolymer (A1) with a mol. weight of 2113, a viscosity of 200 mPa.s and an OH number of 53.1 mg KOH/g. A mixture of 100 g (A1), 34.63 g Vestanat IPDI (RTM: polyisocyanate) and 0.1 g dibutyltin dilaurate was stirred for 2 hours at 80-90degreesC, treated with 4.1 g dimethylolpropionic acid and reacted at 80-90degreesC until the calculated NCO content was obtained (4.72 wt%). The prepolymer was then cooled to 60degreesC, neutralized with 2.78 g triethylamine, dispersed in 145.26 g water and chain-extended with 3.75 g ethylenediamine. This gave a stable polyurethane dispersion (B2) with a solid content of 50 weight% and a charge density of 18.91 (18.41) meq/100 g. Film produced from (B2) showed a tensile strength of 19.9 (24.8) MPa, an elongation at break of 799 (862) % and a water absorption (after 7 days' drying) of 5.6 (7.7) weight% after 4 hours in water or 17.3 (28.6) weight% after 7 days in water. A mixture of 290.52 g dispersion (B2) and 150.64 g water was treated over 1 hour with a mixture of 67.25 g n-butyl acrylate, 28.82 g methyl methacrylate and 0.77 g 2,2'-azobis-isobutyronitrile, slowly heated to 50-60degreesC and reacted

for 5 hours at 80-90degreesC to give a stable hybrid polymer dispersion (C1) with a solid content of 45 weight% and a charge density of 11.35 (11.04) meq/100 g. Film produced from (C1) showed a tensile strength of 9.5 (10.0) MPa, an elongation of 795 (804) % and a water absorption (see above) of 4.8 (7.0) weight% after 4 hours or 16.33 (21.0) weight% after 7 days. Values in brackets were obtained by replacing dispersion (B2) with a dispersion (V1) made with conventional polypropylene glycol (PPG; OH number 56) instead of the hydrophobically-modified PPG (A1).

FS CPI GMPI

FA AB

MC CPI: A05-G03; A10-D; G02-A02H; G02-A05; G02-A05F; G03-B02E4; G04-B02

L41 ANSWER 3 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 2001-191260 [19] WPIX

DNN N2001-135958 DNC C2001-057232

TI One-part, moisture-curable, foaming **polyurethane**  
adhesive useful for composite **roof** structures, comprises  
an **isocyanate**-tipped prepolymer and a reversibly blocked  
catalyst, and no foam stabilizers or low-boiling diluents.

DC A14 A17 A25 A93 G03 Q45

IN HATGAS, D J; MARGOT, C D; STREETS, R L; TOWNSEND, T S

PA (ASHL) ASHLAND INC

CYC 92

PI WO 2001000944 A2 20010104 (200119)\* EN 18 E04D000-00 <--  
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
 NL OA PT SD SE SL SZ TZ UG ZW  
 W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES  
 FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS  
 LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL  
 TJ TM TR TT TZ UA UG UZ VN YU ZA ZW  
 AU 2000054650 A 20010131 (200124) E04D000-00 <--  
 US 6305143 B1 20011023 (200165) E04B001-00 <--  
 EP 1194659 A2 20020410 (200232) EN E04D001-00 <--  
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
 RO SE SI

ADT WO 2001000944 A2 WO 2000-US15483 20000606; AU 2000054650 A AU 2000-54650  
 20000606; US 6305143 B1 US 1999-344462 19990625; EP 1194659 A2 EP  
 2000-939580 20000606, WO 2000-US15483 20000606

FDT AU 2000054650 A Based on WO 2001000944; EP 1194659 A2 Based on WO  
 2001000944

PRAI US 1999-344462 19990625

IC ICM E04B001-00; E04D000-00; E04D001-00

AB WO 2001000944 A UPAB: 20010405

NOVELTY - A one-part, moisture-curable, foaming **polyurethane**  
adhesive for composite **roof** structures comprises an  
**isocyanate**-terminated prepolymer containing reversibly blocked  
catalyst comprising the addition product of a **sulfonyl**  
**isocyanate**, a tertiary amine and/or a tin (II) or tin (IV)  
carboxylate, and the composition contains no foam stabilizers or  
low-boiling diluents.

DETAILED DESCRIPTION - A composite **roof** structure  
comprises:

(a) a **roof** deck;(b) at least one layer of **roofing** material; and(c) an **adhesive** reaction product of a one-part,  
moisture-curable, foaming **polyurethane adhesive**  
composition comprising:(i) an **isocyanate**-terminated prepolymer made from at least  
one organic polyisocyanate and at least one compound containing at least 2

*applicable*

**isocyanate-reactive groups; and**

(ii) a reversibly blocked **catalyst** comprising the addition product of a **sulfonyl isocyanate**, a tertiary amine and/or a tin(II) or tin(IV) carboxylate; such that the blocked **catalyst** is dissolved or dispersed in the prepolymer, and the **adhesive composition** is free of foam stabilizers and low-boiling diluents of boiling point 20-80 weight%.

An INDEPENDENT CLAIM is also included for a method of adhering **roofing material** to a **roof deck** comprising:

- (A) applying the above **adhesive** to a **roof deck**;
- (B) positioning the **roofing material** on the deck with sufficient pressure to seat the material in the **adhesive**; and
- (C) letting the **polyurethane** composition foam, fill and cure.

**USE** - For attaching a **roofing material** to a **roof deck** and gap-filling.

**ADVANTAGE** - The **adhesives** are storage stable in the absence of water and they can be used as a gap-filling **adhesive** to attach a **roofing material** to an irregular surface. The one-part composition eliminates the need for mechanical fasteners, bulky mixing and metering equipment, and pressured product containers. When exposed to water, the **adhesive** foams and cures rapidly to provide a gap-filling foam and excellent bonding between layers of **roofing material** and either a **roof deck** or further **roofing material** layers.

Dwg.0/0

TECH WO 200100944 A2UPTX: 20010405

**TECHNOLOGY FOCUS - POLYMERS** - Preferred Components: The **roof deck** may be plywood, chipboard, concrete or a ferrous or non-ferrous metal, or an existing composite **roof** structure. The **roofing material** is a thermoplastic membrane, a rigid foam panel, a poly(vinyl chloride) membrane or a chlorosulfonated polyethylene membrane, and more than one layer of the material may be used. The prepolymer is prepared from diphenylmethane diisocyanate and a nitrogen-free polyether polyol. The **catalyst** comprises the addition product of a **sulfonyl isocyanate**, a tertiary amine and a tin(II) or tin(IV) carboxylate.

Preferred Method: The **roof deck** is misted with water or an acidic, aqueous solution before applying the **adhesive**.

ABEX WO 200100944 A2UPTX: 20010405

**EXAMPLE** - A prepolymer was prepared by stripping Pluracol 593 (RTM: polyether polyol) (55.18 weight%) to a moisture level of less than 200 ppm at 250degreesF under vacuum; cooling the polyol to 180degreesF and reacting it with Lupranate MM 103 (RTM: carbodiimide-modified MDI, NCO content 29.5 weight%) (25.99 weight%). The prepolymer was cooled to 130degreesF and mixed with polymeric a MDI/blocked catalyst prepared by cooling Polyisocyanate Number 255 (RTM: polymethylene polyphenyl isocyanate, NCO content 31.5 weight%) (16.55 weight%) to 15degreesC and adding, under an inert atmosphere, Jeffcat ZF-20 (RTM: bis(2-dimethylaminoethyl) ether) (0.41 weight%) then p-toluene sulfonyl isocyanate (PTSI, 1.53 weight%) at a rate which kept the temperature below 21degreesC. Jeffcat T-21 (RTM: tin dilaurate) (0.14 weight%) was added with further PTSI (0.20 weight%) keeping the temperature below 21degreesC. The formulation was packaged under argon. It had a free NCO content of 10.0-11.0 weight%, a room temperature Brookfield viscosity of 15,000-25,000 cPs, a foam initiation time of 5.0-10.0 minutes, a maximum foam rise in 20 minutes (at above 40degreesF/above 40% relative humidity) of 0.75-1.0 inches and a lap shear strength on CDX plywood of 300-500 pound/linear inch. The failure mode was substrate failure.

FS CPI GMPI

FA AB  
MC CPI: A12-R05; A12-S02F; G03-B02E4

L41 ANSWER 4 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN  
AN 2001-024679 [03] WPIX  
DNC C2001-007461  
TI Copolymer composition useful for production of automotive body panels, paving materials and **adhesives**, comprises styrenic block copolymer resin and polyphenylene ether resin.  
DC A18 A28 A81 G03  
IN BRAAT, A J F M; CHAO, H S; DAVID, B; LISKA, J; MERFELD, G D; SINGH, N; YATES, J B; YEAGER, G W  
PA (GENE) GENERAL ELECTRIC CO  
CYC 29  
PI WO 2000064973 A1 20001102 (200103)\* EN 40 C08L053-02  
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
W: AU BR CA CN CZ IN JP KR MX RU SG  
AU 2000040642 A 20001110 (200109) C08L053-02  
ADT WO 2000064973 A1 WO 2000-US8778 20000403; AU 2000040642 A AU 2000-40642 20000403  
FDT AU 2000040642 A Based on WO 2000064973  
PRAI US 1999-300860 19990428  
IC ICM C08L053-02  
ICS C09J153-02  
AB WO 200064973 A UPAB: 20010116  
NOVELTY - A composition comprises (A) at least one styrenic block copolymer resin and (B) at least one polyphenylene ether resin.  
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for: (i) a fabricated article comprising (I), (ii) a fiber, foam or lattice comprising (I) and (iii) an **adhesive** formulation comprising (I).  
USE - (I) is useful for the manufacture of automotive body panels, roofing, road repair and paving materials, pressure sensitive **adhesives**, sealants and hot melt **adhesives**.  
ADVANTAGE - Products made from (I) have an improved tensile strength, ductility, elastic recovery and thermal performance.  
Dwg. 0/0  
TECH WO 200064973 A1UPTX: 20010116  
TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: (I) does not contain polyamide resins, polysiloxanes, acrylonitrile-butadiene-styrene (ABS), polyvinyl chloride, **polyurethanes**, polyarylene sulfides, polystyrene resins, high impact polystyrene resins, polyolefin resins, polyester resins, polycarbonate resins, polysulfone resins, polyether sulfone resins, polyarylate resins, polyphenylene sulfide resins and/or polyether imide resins. (B) has an intrinsic viscosity of 0.08-0.20 dl/g (measured in chloroform at 25 degreesC). (I) contains up to 50, preferably up to 20 wt.% (B). (B), having an intrinsic viscosity of 0.05-0.60, preferably 0.08-0.20 dl/g (measured in chloroform at 25 degreesC), is prepared by oxidative coupling of at least one monovalent phenol species using an oxygen containing gas and a complex metal **catalyst** in a reaction solution; recovering the complex metal **catalyst** with an aqueous containing solution and isolating (B) through devolatilization of the solvent. The process further comprises an equilibrium of a metal chelating agent with the complex metal **catalyst**. The intrinsic viscosity of (B) varies by less than 10% before and after thermal equilibration at 200 degreesC for 0.2-20 minutes. The devolatilization is accomplished at least in part with a devolatilization extruder which is at least partly operated at 185-220 degreesC and an underwater pelletizer. The reaction solvent has a solids level of at least 65% before feeding into the devolatilization extruders. The monovalent phenol species is

2,6-dimethylphenol and/or 2,3,6-trimethylphenol. (B) contains less than 0.3 wt.% of an incorporated amine. (B) has a residual volatiles level of less than 600 ppm (based on the weight of (B)). Less than 50, 25 preferably 10% of (B) has two hydroxyl groups per polymer chain. (B) comprises a functionalized polyphenylene ether resin prepared by redistribution of a functionalized phenolic compound. (A) comprises a poly(alkenyl aromatic) block of at least 15 repeat units attached to a second polymer or copolymer of at least 15 repeat units. (A) comprises copolymers of formula  $((\text{styrene})_n - (\text{X})_m)^m$  (I). (A) is a block and/or graft copolymer. (A) is a di-block copolymer, tri-block copolymer, or higher multi-block copolymer, branched copolymer, multi-arm copolymer, radial copolymer, comb copolymer and/or a tapered copolymer. (A) is polystyrene-poly(ethylene-butylene), polystyrene-polyisoprene, poly(alpha-methylstyrene)-polybutadiene-poly(alpha-methylstyrene), polystyrene-poly(butadiene), polystyrene-poly(butadiene)-polystyrene block copolymer, poly(alpha-methylstyrene)-polybutadiene, polystyrene-poly(ethylene butylene)-polystyrene block copolymer and/or polystyrene-poly(ethylene propylene) block copolymer. The article comprising (I) is made by compression molding, injection molding, blow molding, profile extrusion and/or thermoforming operations.  
 styrene = an alkenyl aromatic monomer of formula (II);  
 G = H, lower alkyl or halogen;  
 Z = vinyl, lower alkyl or halogen;  
 p = 0-5;  
 X = a second polymer or copolymer of one or more monomers, preferably polyester, polyamide, polyolefin, polycarbonate, polyimide, polysulfone, polyether sulfone, polyphenylene ether and/or liquid crystalline polymer; n at least 15, m at least 1.

FS CPI

FA AB

MC CPI: A04-C01A; A05-H07A; A07-A04E; G03-B02D3; G03-B02E; G04-B02

L41 ANSWER 5 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 2000-506803 [46] WPIX

DNN N2000-374785 DNC C2000-152107

TI Filled foam useful as fire retardant, thermal and acoustic insulating form suitable for injection into cavity is based on polyisocyanate, carboxylic acid heat-resistant inorganic filler and micropore former and heat-activated swelling agent.

DC A23 A25 A93 G04 Q43 Q67

IN ERNST, W; GRAF, R; KAISER, M; KLUTH, H

PA (COGN-N) COGNIS DEUT GMBH

CYC 91

PI DE 19912988 C1 20000817 (200046)\* 12 C08L075-00

WO 2000056810 A1 20000928 (200050) GE C08K003-00

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL  
OA PT SD SE SL SZ TZ UG ZWW: AE AL AM AU AZ BA BB BG BR BY CA CN CR CU CZ DM EE GD GE GH GM HR  
HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LV MA MD MG MK MN  
MW MX NO NZ PL RO RU SD SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN  
YU ZA ZW

AU 2000041053 A 20001009 (200103) C08K003-00

EP 1171518 A1 20020116 (200207) GE C08K003-00

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI

NO 2001004602 A 20011120 (200207) C08K000-00

ZA 2001007780 A 20030226 (200321) 42 C08K000-00

ADT DE 19912988 C1 DE 1999-1012988 19990322; WO 2000056810 A1 WO 2000-EP2249  
20000314; AU 2000041053 A AU 2000-41053 20000314; EP 1171518 A1 EP

2000-920499 20000314, WO 2000-EP2249 20000314; NO 2001004602 A WO  
2000-EP2249 20000314, NO 2001-4602 20010921; ZA 2001007780 A ZA 2001-7780  
20010920

FDT AU 2000041053 A Based on WO 2000056810; EP 1171518 A1 Based on WO  
2000056810

PRAI DE 1999-19912988 19990322

IC ICM C08K000-00; C08K003-00; C08L075-00

ICS C08G018-34; C08G018-42; C08G018-66; C08J009-14; C08K007-24;  
C09K021-00; E04B001-94; F16L059-04

AB DE 19912988 C UPTX: 20000921

NOVELTY - Filled foam is claimed, which is obtained by reacting (I) polyfunctional **isocyanates** and (II) mixtures of (a) carboxylic acids, optionally (b) alcohols and/or primary and/or secondary amines and (c) filler mixtures of (c-1) inorganic filler resistant to high temperature, (c-2) filler resistant to high temperature and forming micropores and (c-3) heat-activated swelling agent.

DETAILED DESCRIPTION - Filled foam is claimed, which is obtained by reacting (I) polyfunctional **isocyanates** and (II) mixtures of (a) carboxylic acids and optionally (b) alcohols and/or primary and/or secondary amines, in which (a) and/or (b) must be polyfunctional and/or combined to a hydroxycarboxylic acid and/or aminocarboxylic acid, and (c) filler mixtures of (c-1) inorganic filler resistant to high temperature, (c-2) filler resistant to high temperature and forming micropores and (c-3) heat-activated swelling agent.

An INDEPENDENT CLAIM is also included for a process in which components (I) and (II) are in separate compartments and the filled foam is produced by mixing the components.

USE - The product is used as fire retardant foam and thermal and acoustic insulation (all claimed).

ADVANTAGE - Foam incorporated in buildings for thermal insulation is usually in the form of slabs and is not used in positions of particular importance in fire protection, e.g. where there are openings, cables and pipes in the walls and roof. Existing resin foam used for filling such cavities by injection does not provide adequate fire resistance. The present foam has better fire resistance and gives the required high fire resistance when produced in situ from 2 components. It can also be applied from aerosol cans as one-component foam and is suitable for reaction injection molding. The mixture requires no or little heating and the 2-component foams have a good shelf-life. The foam is also economical.

Dwg.0/0

TECH DE 19912988 C1 UPTX: 20000921

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Composition: Component (I) and/or (II) may also contain **catalyst**, foam stabilizer, liquid fire retardant and/or silica; and component (II) may also contain water. The filler mixture may contain **adhesive**, milling aid and/or anticaking agent.

Preferred Filler: Filler (c-1) is selected from calcium carbonate, calcium sulfate, clay, alumina, magnesium oxide and aluminum silicate and has an average particle size of 1-20 µm. Filler (c-2) is selected from expanded perlite, vermiculite, clay, graphite or water glass; alumina, glass or fly ash microballoons; and porous concrete. The filler especially is a mixture of 20-90 wt.% (c-1), 1-30 wt.% (c-3), 0.1-35 wt.% **adhesive**, 2-40 wt.% (c-2) and 0.01-10 wt.% milling aid and/or anticaking agent.

TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: Component (I) comprises (cyclo)aliphatic and aromatic **isocyanates** and their oligomers with **isocyanate** (NCO) groups. The carboxylic acid is a polyhydroxypolycarboxylic acid and the alcohol a polyester and/or

Polyether polyol.

Preferred Process: Components (I) and (II) are in a cartridge system and are used in 1:2 to 2:1, especially 1:1 volume ratio. Foaming is carried out at 0-40 degrees C.

ABEX DE 19912988 C1 UPTX: 20000921

SPECIFIC COMPOUNDS - Specific examples of filler (c-1) are calcium carbonate, calcium sulfate, clay, alumina, magnesium oxide and aluminum silicate. Specific examples of filler (c-2) are expanded perlite, vermiculite, clay, graphite and water glass; and alumina and fly ash microballoons

EXAMPLE - Component (I) contained (weight%) Desmodur 44V20 (RTM; polymer based on diphenylmethane 4,4'-diisocyanate; F = 2.7; viscosity = 200 mPas at 25 degrees C to DIN 53211) (87.5), Aerosil (RTM; silica produced by flame hydrolysis) (4.0) and aluminum silicate microballoons (8.5). Component (II) contained (weight%) Sovemol 1010 (RTM; succinic acid-glutaric acid-adipic acid-polyether triol-sec.-glycerol-propylene oxide adduct polyester, carboxypolyol) (32.5), dimethylolpropionic acid (0.5), Voranol RA-800 (RTM; polyether polyol, hydroxyl (OH) number = 800) (6.0), Voranol CP-6055 (RTM; polyether triol, OH number = 27) (6.0), water (1.2), Tegostab (RTM; foam stabilizer) (1.6), a catalyst mixture of Silopren Kat. 162 (RTM; dibutyl-tin dilaurate) (1.2), 2,2'dimorpholinodiethyl ether (1.2) and 1-methylimidazole (1.2), tris(2-chloroisopropyl) phosphate (20.8), Aerosil (RTM; pyrogenic silica) (6.0), filler mixture (22.0) and other additives (0.5), e.g. cell opener. The filler mixture comprised (weight%) kaolin (filler (c-1), average particle size 3 microm) (75.4), native vermiculite (component (c-3), 0.001-3000 microm) (9.8), melamine phosphate (20 microm) (2.4) and zinc borate (5 microm) (2.4) as adhesives, glass microballoons (filler (c-2), 0.001-100 microm) (9.8) and calcium stearate (milling aid and/or anticaking agent; 10 microm) (0.2). A coaxial cartridge was filled with components (I) and (II) in 1:1 volume ratio and these were injected into brickwork containing a pipe from a spray gun with static mixer. This gave foam with a density of about 55.0 g/l. When used for filling a 30 mm wide cavity in 150 mm concrete walls, it gave a fire resistance of at least 90 minutes to DIN 4102, part 2.

FS CPI GMPI

FA AB

MC CPI: A05-G01E; A08-R01; A12-S02F; G04-B06

L41 ANSWER 6 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 2000-475502 [41] WPIX

DNC C2000-142426

TI One-component, moisture curable **adhesive** composition used for securing insulation to a **roof** deck, contains silylated polymer and extender.

DC A23 A25 A81 E19 G03

IN KUBISH, S; WANG, X; WOOD, J F

PA (ADCO-N) ADCO PROD INC

CYC 20

PI WO 2000037534 A1 20000629 (200041)\* EN 17 C08G065-336

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: AU CA

AU 2000023889 A 20000712 (200048) C08G065-336

ADT WO 2000037534 A1 WO 1999-US30941 19991222; AU 2000023889 A AU 2000-23889 19991222

FDT AU 2000023889 A Based on WO 2000037534

PRAI US 1998-113301P 19981222

IC ICM C08G065-336

ICS C08G018-08; C08G018-10; C09J201-10

AB WO 200037534 A UPAB: 20000831

NOVELTY - A one-component, moisture-curable **adhesive** composition (I) comprising: a) a silylated **-polyurethane** or polyether; b) an extender of coal tar, an aromatic oil or hydrocarbon resin.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) A **roof** system comprising **roofing** insulation secured to a **roof** deck substrate by the **adhesive** composition (I).

(2) A method of adhering **roofing** insulation to a **roof** deck, involves:

(i) applying the **adhesive** composition to a **roof** deck;

(ii) placing the insulation in contact with the **adhesive**; and

(iii) curing the **adhesive**.

USE - For securing **roofing** insulation to **roof** deck (claimed), particularly flat **roofing**. In caulking and sealing applications.

ADVANTAGE - **Adhesive** is solvent-free and provides up-life strength of at least 200 Lbs/ft<sup>2</sup>.

Dwg. 0/1

TECH WO 200037534 A1UPTX: 20000831

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: The extender is coal tar and the composition further contains:

(1) a plasticizer of a phthalate, mellitate, benzoate, phosphate, butyrate, polyester, adipate, sebacate, aromatic or cyclic oil, epoxidized oil or solvent, and especially of diundecyl phthalate;

(2) 4,4-diphenylmethane diisocyanate as moisture scavenger;

(3) a **catalyst** of dibutyl tin diacetate, 1,8-diaza-bicyclo(5,4,0)undecene-7, and/or bis-(2-dimethylaminoethyl)ether.

Preferred Composition: The **adhesive** composition is for securing insulation to a **roof** deck, and comprises (wt.%):

(a) silylated polymer of **polyurethane** or polyether (20-50);

(b) extender (30-85);

(c) plasticizer (2-25), of (A) and especially diundecyl phthalate; and

(d) 4,4-diphenylmethane diisocyanate as moisture scavenger (0.5-10).

ABEX WO 200037534 A1UPTX: 20000831

EXAMPLE - An adhesive composition was prepared from (weight%) RT-7 (RTM: coal tar) (54.66), diundecyl phthalate (19.52), Isonate 50-OP (RTM: 4,4-diphenylmethane diisocyanate) (2.15), homogenized for 5-15 minutes, then having Dabco BL-19 (RTM: amine catalyst) added and further homogenized for 5-15 minutes then mixed under vacuum until moisture level was 400 ppm. A silylated polymer (23.43) was added then Metacure T-1 (RTM: catalyst) (0.12) and Polycat DBU (RTM: catalyst), homogenized for 5-15 minutes and then mixed under vacuum for 30-60 minutes.

FS CPI

FA AB; DCN

MC CPI: A05-G01E; A05-H01B; A08-C10; A08-D06; A08-P01; A10-E22A; A11-C01C; A11-C02; A12-R04; A12-R08; E05-F01; E06-D07; E10-B01D; E10-G02F1; G03-B02; G04-B02

L41 ANSWER 7 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 1996-261459 [27] WPIX

DNC C1996-082799

TI Production of gel-coated, shaped articles with reduced processing time - inter-layer adhesion being improved by incorporating a backing layer between the gel coat and reinforcing layers.

DC A23 A25 A32 P73

IN SMITH, S  
 PA (ENIE) ECP ENICHEM POLIMERI NETHERLANDS BV  
 CYC 18  
 PI EP 714743 A1 19960605 (199627)\* EN 10 B29C043-20  
     R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE  
     US 5904986 A 19990518 (199927) B32B027-40  
     US 5936034 A 19990810 (199938) C08G018-10  
 ADT EP 714743 A1 EP 1995-116088 19951012; US 5904986 A Div ex US 1994-350142  
     19941129, Cont of US 1997-832794 19970404, US 1997-951489 19971016; US  
     5936034 A Div ex US 1994-350142 19941129, US 1997-832794 19970404  
 PRAI US 1994-350142 19941129; US 1997-832794 19970404;  
     US 1997-951489 19971016  
 REP 4.Jnl.Ref; JP 10038222; JP 58162324; JP 60149412; JP 63276511; WO 8606388  
 IC ICM B29C043-20; B32B027-40; C08G018-10  
 ICS C08J005-00  
 AB EP 714743 A UPAB: 19960710  
     Gel-coated, shaped articles are produced by: (a) applying a gel coat layer  
     of an unsatd. polyester resin system onto a mould surface; (b) applying  
     onto this layer, after 5-7 mins., a backing layer comprising: (i) 50-75  
     weight% unsatd. polyester resin; (ii) 3-25 weight% quasi-prepolymer with free  
     NCO content 16-27%; (iii) 0.5-5 weight% of a curing system comprising: (A) a  
     catalyst for (i); (B) an accelerator for (i); and (C) opt., an  
     isocyanate trimerisation catalyst; and (iv) O-balance to  
     100 weight% additives; (c) applying onto the backing layer, after 5-8 mins.,  
     a polyurethane system layer, opt. containing reinforcement; and (d)  
     curing the composite obtd..  
     Also claimed are: (i) the backing layer compsn. above; (ii) a gel-coated  
     shaped article comprising the layers above; and (iii) an article  
     obtainable by the above method.  
     USE - In the production of bath tubs, shower trays, boat hulls,  
     roofing panels, walls and doors of industrial buildings or  
     recreational vehicle, etc..  
     ADVANTAGE - Total processing time is reduced, while maintaining the  
     physico-mechanical properties of the produced articles, the backing layer  
     promoting adhesion between the layers.  
 Dwg.0/0  
 FS CPI GMPI  
 FA AB  
 MC CPI: A05-D02E1; A05-G01E; A07-A03C; A07-A03D; A08-C01; A11-B09E; A11-C02D  
  
 L41 ANSWER 8 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN  
 AN 1993-313421 [40] WPIX  
 CR 1993-295283 [37]; 1993-377494 [47]; 1993-385700 [48]; 1994-056390 [07]  
 DNC C1993-139232  
 TI New hydroxyl functional derivs. of epoxidised diene block copolymers -  
     prepared by epoxidising precursor polymer containing olefinic unsaturation then  
     catalysed reaction of epoxy gps. with alcohol.  
 DC A12 A81 A82 G02 G03  
 IN BENING, R C; ERICKSON, J R; FLORES, J J; GIBLER, C J; ST, CLAIR D J;  
     STARK, C J  
 PA (SHEL) SHELL INT RES MIJ BV; (SHEL) SHELL CANADA LTD; (KRAT-N) KRATON  
     POLYMERS RES BV; (SHEL) SHELL INT RES MIJ NV; (SHEL) SHELL OIL CO  
 CYC 14  
 PI EP 564049 A2 19931006 (199340)\* EN 29 C08F008-00  
     R: BE DE ES FR GB IT NL  
     BR 9301405 A 19931005 (199344) C08F297-04  
     CA 2093192 A 19931004 (199401) C08F297-00  
     JP 06025324 A 19940201 (199409) 26 C08F008-04  
     US 5300586 A 19940405 (199413) 11 C08F008-00

TW 222006	A 19940401 (199419)	C08F236-04
CN 1077459	A 19931020 (199428)	C08F299-00
US 5356969	A 19941018 (199441)	12 C08F008-30
US 5356970	A 19941018 (199441)	12 C08F008-32
US 5356974	A 19941018 (199441)	11 C08F008-00
US 5356975	A 19941018 (199441)	11 C08F008-00
EP 564049	A3 19940316 (199520)	C08F008-00
RU 2130032	C1 19990510 (200026)	C08F008-00
CN 1244542	A 20000216 (200027)	C08F299-00
EP 564049	B1 20011024 (200169) EN	C08F008-00
R: BE DE ES FR GB IT NL		
DE 69330977	E 20011129 (200202)	C08F008-00
ES 2164650	T3 20020301 (200229)	C08F008-00
JP 3285653	B2 20020527 (200241)	24 C08F008-04
CN 1057537	C 20001018 (200471)	C08F008-00
ADT EP 564049 A2 EP 1993-200947 19930402; BR 9301405 A BR 1993-1405 19930401; CA 2093192 A CA 1993-2093192 19930401; JP 06025324 A JP 1993-75594 19930401; US 5300586 A US 1992-863648 19920403; TW 222006 A TW 1993-101788 19930310; CN 1077459 A CN 1993-103654 19930401; US 5356969 A Div ex US 1992-863648 19920403, US 1994-217470 19940324; US 5356970 A Div ex US 1992-863648 19920403, US 1994-217397 19940324; US 5356974 A Div ex US 1992-863648 19920403, US 1994-217472 19940324; US 5356975 A Div ex US 1992-863648 19920403, US 1994-217517 19940324; EP 564049 A3 EP 1993-200947 19930402; RU 2130032 C1 RU 1993-4599 19930401; CN 1244542 A Div ex CN 1993-103654 19930401, CN 1999-108492 19930401; EP 564049 B1 EP 1993-200947 19930402; DE 69330977 E DE 1993-630977 19930402, EP 1993-200947 19930402; ES 2164650 T3 EP 1993-200947 19930402; JP 3285653 B2 JP 1993-75594 19930401; CN 1057537 C CN 1993-103654 19930401		
FDT US 5356969 A Div ex US 5300586; US 5356970 A Div ex US 5300586; US 5356974 A Div ex US 5300586; US 5356975 A Div ex US 5300586; DE 69330977 E Based on EP 564049; ES 2164650 T3 Based on EP 564049; JP 3285653 B2 Previous Publ. JP 06025324		
PRAI US 1992-863580 19920403; US 1992-863648 19920403		
REP No-SR.Pub; EP 387947; US 3135716; US 4051199; US 5002676; WO 9008787		
IC ICM C08F008-00; C08F008-04; C08F008-30; C08F008-32; C08F236-04; C08F297-00; C08F297-04; C08F299-00		
ICS C08C019-40; C08F008-08; C08G059-50; C08J003-24; C08K005-16; C08L053-02; C09D147-00; C09D153-00; C09D153-02; C09D163-08		
AB EP 564049 A UPAB: 20041104	Making block polymers of conjugated dienes containing hydroxyl gps. in the diene block comprises: (a) making a precursor polymer by polymerising a conjugated diene that leaves 1,2 disubstd.; 1,1 disubstd.; 1,1,2 trisubstd. or tetra-substd. olefinic unsaturation in the polymer; (b) epoxidising precursor such that the epoxy gps. form at the substd. sites and the amount of epoxy functionality is 0.1 meq/g polymer or more; and (c) contacting the epoxidised polymer with an alcohol with an unprotected hydroxyl gp. and (an organic complex of) a cpd. of formula MX <sub>n</sub> (I) (where M = H, B, Al, Fe or Sn; X = halogen; n = an integer equivalent to the valence of M).	
The Pref. step (c) takes place at 20-200 deg.C in a solvent, using a mol. ratio of catalyst:epoxy of 0.1-1:1 and diluting the catalyst to a concentration of 1 meq in 0.4-2.0 ml of solvent. The mol. ratio of alcohol:epoxy is 1:15-25 and the polymer concentration 10-20 weight%.		
g epoxidised polymer may be contacted with an alcohol solution containing 0.01-1 of HCl per g of polymer, using a mol. ratio of acid:epoxy of 5:1 or more, and at a temperature of 20-100 deg.C. The block copolymer may be hydrogenated after step (a) or (b) to leave less than 1 meq. of residual olefin per g		

of epoxidised polymer.

The catalyst is pref. BF<sub>3</sub> diethyl etherate, BF<sub>3</sub> t-butyl methyl etherate, BF<sub>3</sub> dibutyl etherate, or BF<sub>3</sub> dimethyl etherate. The alcohol has 1 unprotected OH gp. Any further OH gps. are protected as the acetal, ketal or carbonate. Pref. are n-butanol, solketal and trimethylolpropane ketal. The solvent in step (c) is pref. an aliphatic or aromatic hydrocarbon, a halogenated hydrocarbon or an acyclic ether, 1,3-butadiene or isoprene is pref. in a block polymer of formula (IV) or (V).

USE/ADVANTAGE - In coatings, sealants, many different kinds of adhesives and modified asphalts. The block copolymers can be crosslinked to provide enhanced physical properties. Functionalising the copolymers allows them to be hydrogenated to improve long term heat, weather and UV stability.

Dwg.0/0

Dwg.0/0

FS CPI ,

FA AB

MC CPI: A04-B01A; A04-B01D; A10-C02; A10-E06; A10-E08C; A10-E23; G02-A02D1

L41 ANSWER 9 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on,STN

AN 1992-199572 [24] WPIX

DNC C1992-090837

TI Preparation of latex-lipophilic graft polymers - by polymerising alpha, beta-ethylenically unsatd. monomer units in aqueous medium containing a lipophilic polymer.

DC A18 A28 G02 G03

IN BIALE, J

PA (UNOC) UNION OIL CO CALIFORNIA

CYC 1

PI US 5116901 A 19920526 (199224)\* 7 C08F008-00

ADT US 5116901 A US 1989-444551 19891130

PRAI US 1989-444551 19891130

IC ICM C08F008-00

AB US 5116901 A UPAB: 19931006

Synthesis of graft polymers comprising polymerising alpha, beta-ethylenically unsatd. monomer units in an aqueous medium containing a graft

promoting system and a lipophilic polymer at reaction conditions sufficient to form a latex-lipophilic polymer composed of the lipophilic polymer and the polymerised alpha, beta-ethylenically unsatd. monomer units. The lipophilic polymer (a) is devoid of olefinic unsatn. and (b), prior to becoming part of the latex-lipophilic polymer, contains at least 1 sec. and/or tert. C atom.

Pref. the aqueous medium further comprises a locus for polymerisation and/or an initiation catalyst. At least a portion of the process is conducted under inert atmos.. The lipophilic polymer has a MW less than 200,000, pref. less than 10,000. The alpha,beta-ethylenically unsatd. monomer units are polymerised by an emulsion polymerisation procedure. The lipophilic polymer is introduced into the aqueous medium by dissolving a substantially dry solid lipophilic polymer in a plurality of the alpha, beta-ethylenically unsatd. monomer units to form a feed and the feed is combined with the aqueous medium.

Pref. the graft promoting system is a cerium ammonium nitrate/nitric acid system. The lipophilic polymer is a condensation polymer e.g. polyester polymers, epoxy polymers, silicon polymers, polyamide polymers, polycarbonate polymers, and partic. polyurethane polymers. The latex-lipophilic polymer is a graft polymer and comprises 0.1-50 weight%

lipophilic polymer and at least 50 weight% alpha,beta-ethylenically unsatd. monomer units.

USE/ADVANTAGE - As water-resistant film; binder for paints and varnishes; pressure-sensitive **adhesives**; laminating **adhesive**, wood, plastic, **roofing** and street surface coating; and the solid phase in medical diagnostic analysis. The synthesis is cost effective and uses an aqueous medium.

0/0

FS CPI

FA AB

MC CPI: A10-C03B; G02-A02B; G02-A02C; G02-A02D; G02-A05; G02-A05F; G03-B02C; G03-B02D

L41 ANSWER 10 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 1989-250209 [35] WPIX

DNC C1989-111435

TI **Isocyanate** free can stable EPDM splice **adhesive** compsns. - of brominated pre-crosslinked isobutylene isoprene copolymer butyl rubbers and hydrocarbon resins cured by quinoid mixts..

DC A35 A81 E19 G03 P72

IN NUSSBAUM, S; STREETS, R L

PA (ASHL) ASHLAND OIL INC

CYC 16

PI EP 330089 A 19890830 (198935)\* EN 7

R: AT BE CH DE ES FR GB GR IT LI LU NL SE

US 4881996 A 19891121 (199005) 5

JP 02004883 A 19900109 (199007)

CA 1330373 C 19940621 (199430) C09J153-00

ADT EP 330089 A EP 1989-102765 19890217; US 4881996 A US 1988-158416 19880222; JP 02004883 A JP 1989-36462 19890217; CA 1330373 C CA 1989-591217 19890216

PRAI US 1988-158416 19880222

REP A3...9143; FR 2104278; GB 877923; No-SR.Pub; US 4501842; US 4616048

IC B31F005-00; C08J005-12; C08L023-28; C08L053-00; C09J003-14; C09J005-00; C09J123-28; C09J157-00; C09J201-00

ICM C09J153-00

ICS B31F005-00; B32B007-12; C08J005-12; C08L023-28; C08L053-00; C09J003-14; C09J005-02; C09J123-28; C09J157-00; C09J201-00

AB EP 330089 A UPAB: 19930923

**Adhesive** compsns. and splicing method for elastomeric substrates including EPDM (ethylene propylene diene monomer) substrates, comprising (a) halogenated, especially brominated, precrosslinked isobutylene-isoprene copolymer butyl rubber (ICBR) of formula (I) X = Cl, Br; n = about 50; A = crosslinking agent for part of butyl rubber unsaturation, e.g. 1,3-butadiene. (b) Thermoplastic copolymer. (c) Hydrocarbon resin from thermoplastic hydrocarbon resin, terpene, phenol polymer resin, polymerised pentaerythritol rosin ester. (d) Quinoid cure mixture (e) Solvent.

Component (b) from styrene-butadiene-styrene, styrene-isoprene-styrene, styrene-ethylene-butylene-styrene (SEBS), styrene-ethylene-propylene-styrene copolymers with styrene:rubber ratios 14:86 to 48:52. Component (d): cobaltous acetyl acetone and dibenzoyl p-quinone dioxime.

USE/ADVANTAGE - **Adhesive** splicing of EPOM **roofing**

materials without primer pretreatment of EPDM; single pot

**isocyanate-free adhesive** with 6-month in-can stability.

0/0

FS CPI GMPI

FA AB; DCN

MC CPI: A07-A02A1; A08-C09; A08-M01B; A10-E04A; A12-A05A; A12-R05; E05-L02B; E10-A06; G03-B02B

L41 ANSWER 11 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN  
 AN 1983-742330 [34] WPIX  
 DNC C1983-079472  
 TI Polyurethane compsn. containing **isocyanate** with oxa diazine tri one ring - and poly ol with tert. amino, quat. ammonium or carboxyl salt gp..  
 DC A25 G02 G03  
 IN KAMATANI, Y; NISHINO, K; TANAKA, M; YAMAZAKI, K  
 PA (TAKE) TAKEDA CHEM IND LTD  
 CYC 11  
 PI EP 85776 A 19830817 (198334)\* EN 22  
   R: BE CH DE FR GB IT LI NL  
   JP 58109528 A 19830629 (198334)  
   US 4456744 A 19840626 (198428)  
   CA 1185741 A 19850416 (198520)  
   EP 85776 B 19870304 (198709) EN  
   R: BE CH DE FR GB IT LI NL  
   DE 3275550 G 19870409 (198715)  
   JP 02008614 B 19900226 (199012)  
 ADT EP 85776 A EP 1982-111619 19821214; JP 58109528 A JP 1981-208434 19811223;  
 US 4456744 A US 1982-445098 19821129  
 PRAI JP 1981-208434 19811223  
 REP AT 227952; DE 1670666; EP 43651; FR 1509843; GB 1145952; GB 1341089; US 3748329  
 IC C08G018-78; C09D003-72; C09D175-00; C09J003-16; C09J175-00  
 AB EP 85776 A UPAB: 19930925  
 A compsn. for a **polyurethane** resin comprises (a) an **isocyanate** component with an oxadiazine trione ring, and (b) a polyol with a tert. amino gp., a quat. ammonium gp., and/or a salt-formed COOH gp.  
 (a) is especially prepared by reacting an **isocyanate**, or an adduct with terminal NCO gps. (opt. partially blocked), with CO<sub>2</sub>. The **isocyanate** may be aliphatic, alicyclic or aromatic-aliphatic; hexamethylene diisocyanate, 1-**isocyanato**-3-**isocyanatomethyl** -3,5,5-trimethylcyclohexane, or bis-(**isocyanatomethyl**) -cyclohexane are claimed. Reaction is in presence of a **catalyst**, especially a tert. phosphine, and is pref. stopped by a terminator, partic. a peroxide, S, a polysulphide, a metal sulphide, or halogen. The functionality, i.e. oxadiazinetrione ring + NCO gps., is pref. 2-10. (b) has mol. weight 100-100,000 (100-50,000) especially 100-30,000 with 2-50 OH gps. Polyester, polyether, polyether-ester, polyester-amide, acrylic, **polyurethane**, epoxy, epoxy-modified, and oil-modified polyols, and castor oil, with tert. amino, quat. ammonium or salt-formed COOH gps., are claimed. The amount of N or carbonyloxy is 0.0001-10 (0.0005-5) weight%. The ratio of NCO + oxadiazinetrione gps.:OH is 0.1-10 (0.5-3), especially 0.4-2 (0.6-1.4) for coating compsns.  
 (a) can be used in small amts. as a high-solids or solvent-free curing agent. The **catalyst** does not bleed out. The pot life is relatively long. Curing may be at room temperature, giving compsns. with good film, **adhesive** and physical properties, e.g. resistance to weather, water and solvents, and good gloss. The compsn. bonds and coats wood, metals, plastics, rubber, paper, **roofing** tiles, and concrete.  
 FS CPI  
 FA AB  
 MC CPI: A05-G01A; A05-G01E1; A12-A05F; A12-B01K; G02-A02H; G03-B02E4

L41 ANSWER 12 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 1982-45980E [22] WPIX  
TI Installation of foam insulation - by spraying heated mixture of polyurethane adhesive and isocyanate curing agent, applying insulation board and curing adhesive.  
DC A25 A35 A93 G03 P73 Q43 Q44 Q45  
PA (SUOM-I) SUOMALA P  
CYC 11 2  
PI WO 8201684 A 19820527 (198222)\* EN 11 /  
RW: AT CH DE FR GB LU SE  
W: AU JP  
EP 65527 A 19821201 (198249) EN  
R: AT CH DE FR GB LI LU SE  
CA 1183073 A 19850226 (198513)  
PRAI US 1980-208240 19801119  
REP CA 627039; GB 970308; US 2929800; US 3106751; US 3804931; US 4224376  
IC B32B005-18; B32B007-12; B32B027-40; C09J005-02; E04B007-00;  
E04C001-00; E04D011-02  
AB WO 8201684 A UPAB: 19930915  
Method for bonding insulation to a substrate comprises (a) applying a layer of adhesive to the substrate, consisting of a heated mixture of a polyurethane adhesive and an isocyanate curing catalyst, using a mixing ratio which allows curing of the adhesive at below 140 deg.F; (b) positioning insulating board on the adhesive in the required position and (c) curing the adhesive.  
Pref. the adhesive and catalyst are heated separately such that their viscosities become equal, then they are sprayed simultaneously onto the substrate, and the insulation is applied within 1-10 mins. of application of the adhesive compsn. The adhesive and catalyst may be mixed with a blowing agent such as water or a fluorocarbon to give a cellular adhesive formation on curing.  
Pref. adhesive system comprises 50-70 pts.weight, especially 60 pts. weight polyurethane adhesive and 30-50, especially 45 pts.weight catalyst.  
Used especially in the installation of polystyrene and polyurethane foam insulating panels in roofing construction. Application of the adhesive is less hazardous to construction workers than the asphalt or tar adhesives previously used, which required high application temps. and caused a high incidence of injuries to workers and damage to foam insulation panels.  
FS CPI GMPI  
FA AB  
MC CPI: A05-G01E; A11-C01D; A12-A05F; A12-R05; A12-R06; G03-B02E4; G03-B03  
  
L41 ANSWER 13 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN  
AN 1978-77161A [43] WPIX  
TI Composite sheets production - by laminating sheet materials with polyurethane foam precursors and contacting with base sheets after gelling of precursors.  
DC A25 A94 P73  
PA (ISHI-I) ISHIKAWA T  
CYC 1  
PI JP 53106772 A 19780918 (197843)\*  
JP 59036587 B 19840904 (198439)  
PRAI JP 1977-21902 19770228  
IC B29D027-04; B32B031-06  
AB JP 53106772 A UPAB: 19930901  
Composite sheets are produced by laminating sheet-like materials with

polyurethane foam raw materials and contacting the laminates obt'd. with base sheets (e.g. electrically conductive metal sheets) after the raw materials have gelled.

The pref. base sheets include zinc iron sheet, coloured iron sheet, vinyl chloride steel sheet, stainless steel sheet, copper sheet and aluminium sheet. The sheet-like materials are those having excellent adhesive property or flexibility or foams raw material-penetrating property such as craft paper, asbestos paper, asphalt roofing and glass fibre. The foam raw materials comprise, e.g. polyols, polyisocyanates and foaming agents and, if desired, foam stabilisers, catalysts and stabilisers.

FS CPI GMPI  
FA AB  
MC CPI: A11-B06A; A11-B09A; A12-S02

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FILE COVERS 1907 - 16 Nov 2004 VOL 141 ISS 21  
FILE LAST UPDATED: 15 Nov 2004 (20041115/ED)

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=> D QUE L34

L4	67486 SEA FILE=REGISTRY ABB=ON	PUR/PCT
L5	5638 SEA FILE=REGISTRY ABB=ON	L4 AND 1-4/S
L6	1265 SEA FILE=REGISTRY ABB=ON	L5 AND SULFON?
L9	66221 SEA FILE=REGISTRY ABB=ON	L4 NOT L6
L10	38907 SEA FILE=HCAPLUS ABB=ON	L9
L11	68 SEA FILE=HCAPLUS ABB=ON	L10 AND ROOF?
L12	13 SEA FILE=HCAPLUS ABB=ON	L11 AND ADHESIVE?
L13	629 SEA FILE=HCAPLUS ABB=ON	L6
L14	1 SEA FILE=HCAPLUS ABB=ON	L11 AND L13
L15	335 SEA FILE=HCAPLUS ABB=ON	L10 AND L13
L16	39 SEA FILE=HCAPLUS ABB=ON	L15 AND ADHESIVE?
L17	5 SEA FILE=HCAPLUS ABB=ON	L16 AND (CAT/RL OR CATALYST?)
L18	18 SEA FILE=HCAPLUS ABB=ON	L12 OR L14 OR L17
L31	642 SEA FILE=HCAPLUS ABB=ON	(?URETHAN? OR ISOCYANAT?) AND ROOF?
L32	136 SEA FILE=HCAPLUS ABB=ON	L31 AND ADHESIVE?
L33	10 SEA FILE=HCAPLUS ABB=ON	L32 AND (CATALYST? OR CAT/RL)
L34	27 SEA FILE=HCAPLUS ABB=ON	L18 OR L33

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FILE COVERS 1970 TO DATE.

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THE BASIC INDEX >>>

=> D QUE L43  
L31 642 SEA FILE=HCAPLUS ABB=ON (?URETHAN? OR ISOCYANAT?) AND ROOF?  
L43 9 SEA FILE=COMPENDEX ABB=ON L31 AND ADHESIVE?

=> FILE JICST  
FILE 'JICST-EPLUS' ENTERED AT 15:44:04 ON 16 NOV 2004  
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TERM (/CT) THESAURUS RELOAD.

=> D QUE L62  
L62 9 SEA FILE=JICST-EPLUS ABB=ON (POLYURETHAN? OR URETHAN? OR  
POLYISOCYANAT? OR ISOCYANAT?) AND ROOF? AND ADHESIVE?

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FILE COVERS APR 1973 TO JUNE 24, 2004

<<< GRAPHIC IMAGES AVAILABLE >>>

=> D QUE L61  
L60 51 SEA FILE=JAPIO ABB=ON (POLYURETHAN? OR URETHAN? OR POLYISOCYAN  
AT? OR ISOCYANAT?) AND ROOF? AND ADHESIVE?  
L61 5 SEA FILE=JAPIO ABB=ON L60 AND (ROOFING? OR CATALY?)

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FILE COVERS 1972 TO DATE

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basic index (/BI), and in the controlled term (/CT),  
geographical term (/GT), and non-polymer term (/NPT) fields. <<<

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>>> [http://www.stn-international.de/stndatabases/details/rapra\\_classcodes.pdf](http://www.stn-international.de/stndatabases/details/rapra_classcodes.pdf)

=> D QUE L59

L54 138 SEA FILE=RAPRA ABB=ON (POLYURETHAN? OR URETHAN? OR POLYISOCYAN  
AT? OR ISOCYANAT?) AND ROOF? AND ADHESIVE?  
L55 1 SEA FILE=RAPRA ABB=ON L54 AND CATALY?  
L56 66 SEA FILE=RAPRA ABB=ON L54 AND ROOFING?  
L57 1236 SEA FILE=RAPRA ABB=ON MOISTURE(3A)CUR?  
L58 2 SEA FILE=RAPRA ABB=ON L56 AND L57  
L59 3 SEA FILE=RAPRA ABB=ON L58 OR L55

=> DUP REM L27 L43 L62 L62 L59

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PROCESSING COMPLETED FOR L43

PROCESSING COMPLETED FOR L62

PROCESSING COMPLETED FOR L59

L63 22 DUP REM L27 L43 L62 L62 L59 (0 DUPLICATES REMOVED)

=> DUP REM L34 L43 L62 L62 L59

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PROCESSING COMPLETED FOR L62

PROCESSING COMPLETED FOR L59

L64 48 DUP REM L34 L43 L62 L62 L59 (0 DUPLICATES REMOVED)

=> D L64 ALL HITSTR 1-48

L64 ANSWER 1 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2004:550792 HCAPLUS

DN 141:107297  
 ED Entered STN: 09 Jul 2004  
 TI Two-part polyurethane adhesive for bonding insulation boards to a roof deck and adhesive preparation  
 IN Fieldhouse, John W.; Kalwara, Joseph J.; Kane, Edward G.; Letts, John B.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 11 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM C08G018-08  
 NCL 528048000  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 58  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004132953	A1	20040708	US 2003-683050	20031010
PRAI US 2002-418152P	P	20021011		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004132953	ICM	C08G018-08
	NCL	528048000

AB A polyurethane comprises combining an isocyanate, a polyhydroxyl phenol-containing compound, a polyol, and a trimerization catalyst. An example adhesive formulation contained Rubinate 1850 69, plasticizer 45, Poly G 2-265 secondary polyether polyol 80, phenolic resin 20, Bu2Sn dilaurate 0.1-1.0, K nonylphenoxide 1.0-3.0 parts.  
 ST polyurethane polyether phenolic polyisocyanurate adhesive  
 IT Thermal insulators  
     (boards; two-part polyurethane adhesive for bonding insulation boards to a roof deck)  
 IT Polyurethanes, uses  
     RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
     (phenolic-polyisocyanurate-polyoxyalkylene-; two-part polyurethane adhesive for bonding insulation boards to a roof deck)  
 IT Polyoxyalkylenes, uses  
     RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
     (phenolic-polyisocyanurate-polyurethane-; two-part polyurethane adhesive for bonding insulation boards to a roof deck)  
 IT Polyisocyanurates  
     RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
     (phenolic-polyoxyalkylene-polyurethane-; two-part polyurethane adhesive for bonding insulation boards to a roof deck)  
 IT Phenolic resins, uses  
     RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
     (polyisocyanurate-polyoxyalkylene-polyurethane-; two-part polyurethane adhesive for bonding insulation boards to a roof deck)

IT Phenolic resins, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyurethane prepolymer; two-part polyurethane adhesive for bonding insulation boards to a roof deck)

IT Adhesives  
 Roofs  
 (two-part polyurethane adhesive for bonding insulation boards to a roof deck)

IT 54628-06-7 83028-99-3 226998-57-8  
 RL: CAT (Catalyst use); USES (Uses)  
 (two-part polyurethane adhesive for bonding insulation boards to a roof deck)

IT 9016-87-9DP, Rubinate 1850, polyurethane prepolymer  
 718629-39-1DP, Poly G 2-265, polyurethane prepolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (two-part polyurethane adhesive for bonding insulation boards to a roof deck)

L64 ANSWER 2 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:466078 HCAPLUS  
 DN 137:34040  
 ED Entered STN: 21 Jun 2002  
 TI One-component weather-resistant and moisture-curable polyurethane compositions  
 IN Sugiyama, Akira; Kunitomo, Takuya  
 PA Sika A.-G., Switz.  
 SO PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C08G018-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38, 42

FAN.CNT 1	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002048228	A2	20020620	WO 2001-EP14390	20011207
	WO 2002048228	A3	20021212		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	JP 2002179753	A2	20020626	JP 2000-379381	20001213
	AU 2002019162	A5	20020624	AU 2002-19162	20011207
	EP 1343851	A2	20030917	EP 2001-270566	20011207
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
	BR 2001016112	A	20040330	BR 2001-16112	20011207
	US 2004010076	A1	20040115	US 2003-398913	20030602
PRAI	JP 2000-379381	A	20001213		
	WO 2001-EP14390	W	20011207		

CLASS	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002048228	ICM	C08G018-00	
US 2004010076	ECLA	C08G018/10; C08G018/10; C08L075/04	
OS MARPAT 137:34040			
AB	The composition, useful for sealants, <b>adhesives</b> and waterproofing materials for <b>roofs</b> and wall surfaces, comprises a main component which will form a polyurethane resin upon curing, and additives containing ≥1 photocurable materials selected from unsatd. acrylic compds., polyvinyl cinnamate and azide-containing compds.; and a hindered amine photostabilizer; a thixotropic agent comprising a blocked amine compound forming primary or secondary amino group with moisture or a polyurea compound. Thus, 150 parts urethane prepolymer having polypropylene oxide chain skeleton and TDI terminal was mixed with thixotropic agent paste (prepared from MDI and n-butylamine in diisodecyl phthalate) 135, calcium carbonate 135, titanium oxide 30, PVC powder 75, calcium oxide 3, isodecyl phthalate 120, trimethylolpropane trimethacrylate (Aronix M 8060) 9, Adekastab LA 62 (hindered amine photostabilizer) 2, 3-glycidyloxypropyltrimethoxysilane 2, dibutyltin dilaurate 0.6, showing good extrudability, storage stability and weather resistance.		
ST	polyurethane one component moisture curable sealing; butylamine polyisocyanate polyurea thixotropic agent; storage stability polyurethane <b>adhesive</b> waterproof material		
IT	Light stabilizers Sealing compositions Thixotropic agents Waterproofing agents (one-component weather-resistant and moisture-curable polyurethane compns.)		
IT	<b>Adhesives</b> (one-component; one-component weather-resistant and moisture-curable polyurethane compns.)		
IT	Polyurethanes, preparation RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyoxyalkylene-; one-component weather-resistant and moisture-curable polyurethane compns.)		
IT	Polyureas RL: MOA (Modifier or additive use); USES (Uses) (thixotropic agents; one-component weather-resistant and moisture-curable polyurethane compns.)		
IT	9057-91-4P, Polypropylene glycol-TDI copolymer 24968-99-8P, Polyvinyl cinnamate 146123-81-1P, Aronix M 8060 homopolymer RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (one-component weather-resistant and moisture-curable polyurethane compns.)		
IT	107119-91-5, ADK Stab LA 62 RL: MOA (Modifier or additive use); USES (Uses) (photostabilizer; one-component weather-resistant and moisture-curable polyurethane compns.)		
IT	101-68-8DP, Diphenylmethane diisocyanate, reaction products with butylamine 109-73-9DP, n-Butylamine, reaction products with diphenylmethane diisocyanate RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses) (thixotropic agent; one-component weather-resistant and moisture-curable polyurethane compns.)		

IT 9057-91-4P, Polypropylene glycol-TDI copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(one-component weather-resistant and moisture-curable polyurethane  
compns.)

RN 9057-91-4 HCAPLUS

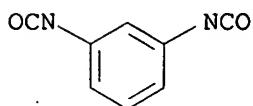
CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha$ -hydro- $\omega$ -hydroxy-, polymer  
with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



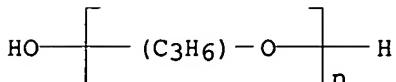
D1-Me

CM 2

CRN 25322-69-4

CMF (C3 H6 O)n H2 O

CCI IDS, PMS



L64 ANSWER 3 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:833326 HCAPLUS

DN 137:314774

ED Entered STN: 01 Nov 2002

TI Fabrication of roofing products with polymer film supporting  
ceramic coated particles in a cured adhesive binder

IN Pinault, Duane M.; Thurber, Ernest L.; Dahlke, Gregg D.; Boettcher, Thomas  
E.; Jacobs, Jeffry L.

PA USA

SO U.S. Pat. Appl. Publ., 9 pp., Cont.-in-part of U.S. Ser. No. 691,352.  
CODEN: USXXCO

DT Patent

LA English

IC ICM B32B001-00

ICS B05D003-00

NCL 428144000

CC 58-4 (Cement, Concrete, and Related Building Materials)  
Section cross-reference(s): 38

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002160151	A1	20021031	US 2002-124451	20020417
PRAI US 2000-691352	A2	20001018		
CLASS				
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
US 2002160151	ICM	B32B001-00		
	ICS	B05D003-00		
	NCL	428144000		
AB	An integrated-granule product includes a polymeric film having ceramic coated granules bonded to the film by a cured <b>adhesive</b> (such as acrylates, <b>urethanes</b> , epoxy resins, polyesters, polyethers, polyester, polyamides and/or polyolefins). The ceramic coated granules may be biocides, antislip friction particles, UV-absorbing particles, reflective particles or pigments. The integrated granule films can be applied onto various substrates for use as <b>roofing</b> products (such as shingles) and flooring products.			
ST	ceramic coated particle polymer film <b>adhesive</b> binder <b>roofing</b> shingle			
IT	Ceramics (abrasive particles; fabrication of <b>roofing</b> products with polymer film supporting ceramic coated particles in a cured <b>adhesive</b> binder)			
IT	Epoxy resins, processes Polyesters, processes Polyethers, processes <b>Urethanes</b> RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process) (acrylated, <b>adhesive</b> ; fabrication of <b>roofing</b> products with polymer film supporting ceramic coated particles in a cured <b>adhesive</b> binder)			
IT	Laminated materials ( <b>adhesive</b> film on asphalt <b>roofing</b> ; fabrication of <b>roofing</b> products with polymer film supporting ceramic coated particles in a cured <b>adhesive</b> binder)			
IT	Phenolic resins, processes Polyamides, processes Polyolefins RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process) ( <b>adhesive</b> ; fabrication of <b>roofing</b> products with polymer film supporting ceramic coated particles in a cured <b>adhesive</b> binder)			
IT	Polycyanurates RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process) ( <b>adhesives</b> ; fabrication of <b>roofing</b> products with polymer film supporting ceramic coated particles in a cured <b>adhesive</b> binder)			
IT	Shingles ( <b>roofing</b> ) (asphalt; fabrication of <b>roofing</b> products with polymer film supporting ceramic coated particles in a cured <b>adhesive</b> binder)			
IT	Pigments, nonbiological (ceramic, coated particles; fabrication of <b>roofing</b> products with polymer film supporting ceramic coated particles in a cured <b>adhesive</b> binder)			

IT Abrasives  
(ceramic, granules; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)

IT Algicides  
Antimicrobial agents  
Biocides  
Friction materials  
Fungicides  
**Photolysis catalysts**  
(coated particles; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)

IT **Adhesive films**  
(cured; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)

IT Floors  
Heating  
Tensile strength  
(fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)

IT Feldspar-group minerals  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)  
(filler; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)

IT Polyesters, processes  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)  
(film; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)

IT Adhesion promoters  
Antioxidants  
**Catalysts**  
Dyes  
Fillers  
Impact modifiers  
UV stabilizers  
(in **adhesive** film; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)

IT Coating materials  
(reflective, coated particles; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)

IT **Roofing**  
(roll; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)

IT Concrete  
Tiles  
Wood  
(substrates; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)

IT Asphalt

Fibers  
Metals, processes  
Polymers, processes  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)  
(substrates; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)  
IT 79-10-7D, Acrylic acid, derivs. 13676-54-5D, Bismaleimides, derivs.  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)  
(**adhesive**; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)  
IT 42978-66-5, Tripropylene glycol diacrylate 79586-45-1, EBECRYL 270  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)  
(coating; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)  
IT 25038-59-9, processes  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)  
(film; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)  
IT 24650-42-8, Irgacure 651  
RL: CAT (**Catalyst use**); USES (Uses)  
(photoinitiator; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)  
IT 1345-05-7, Lithopone  
RL: MOA (Modifier or additive use); USES (Uses)  
(pigment; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)  
IT 9010-77-9, Ethylene-acrylic acid copolymer  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)  
(primer; fabrication of **roofing** products with polymer film supporting ceramic coated particles in a cured **adhesive binder**)  
  
L64 ANSWER 4 OF 48 JICST-EPlus COPYRIGHT 2004 JST on STN  
AN 1020339268 JICST-EPlus  
TI Development of Sound-Absorbing Inner-Roof for Tractor Cabin.  
Application of PET Fiber Board to Sound-Absorbing Inner-Roof.  
AU ISHIDA EIICHI; SHINOHARA MAKOTO  
CS Kubota, Corp., JPN  
SO Nippon Kikai Gakkai Ronbunshu. C (Transactions of the Japan Society of Mechanical Engineers. C), (2002) vol. 68, no. 667, pp. 774-779. Journal Code: F0045B (Fig. 14, Tbl. 1, Ref. 4)  
ISSN: 0387-5024  
CY Japan  
DT Journal; Article  
LA Japanese  
STA New  
AB Sound-absorbing inner-roof which is made of PET(Poly Ethylene Terephthalate) fiber has been developed by the authors. Sound-absorbing

inner-roof is polyester fiber board, so it is harmless and recyclable. First of all, we explain tractor cabin structure and double roof ceiling. Secondly, we investigate the Sound-absorbing characteristics of the polyester fiber board with backward air layer, because the ceiling of tractor cabin consists of double roofs in which the air conditioning parts are installed and space is exists. As a result, the calculation of Sound-absorbing characteristics coincide with measurement result, and it becomes clear that the sound-absorbing characteristics of the polyester fiber board is better than that of polyurethane foam. Finally, we adapt the polyester fiber board to the inner-roof of the tractor cabin. Then we confirmed that the polyester fiber board reduces the sound level 2.4dB, especially, 6dB at 1/3 octave band of 500Hz. (author abst.)

- CC QG05040J; YH06050M (629.332; 678.06:629.11)
- CT tractor; cabin; interior finishing material; ceiling; sound absorbing material; polyethylene terephthalate; nonwoven fabric; compression molding; noise measurement(pollution); film **adhesive**
- BT automobile; room; finishing material; material; acoustic material; thermoplastic; plastic; aromatic polyester; polyester; polymer; fabric; textile product; product; polymer processing; working and processing; forming and molding; acoustic measurement; measurement; **adhesive**
- L64 ANSWER 5 OF 48 COMPENDEX COPYRIGHT 2004 EEI on STN
- AN 2003(26):3680 COMPENDEX
- TI Subject of the month ... Polyolefin reactive (POR) hotmelts in the fabrication of sandwich elements.  
Thema des monats ... POR-hotmelts in der sandwichelementfertigung.
- AU Starck, Felix (Jowat Lobers u. Frank GmbH/Co. KG, 32758 Detmold, Germany); Terfloth, Christian
- SO Adhaesion Kleben und Dichten v 46 n 9 2002.p 16-20  
CODEN: ADHAES ISSN: 0943-1454
- PY 2002
- DT Journal
- TC Theoretical
- LA German
- AB Most of the wall, body and **roof** components of utility vehicles are made from sandwich structures. Usually, two-component **polyurethane adhesives** are used to fabricate those elements. However, after bonding, **polyurethanes** require many hours of pressure treatment, Use of reactive hotmelts optimizes the productivity of the bonding element fabrication. The new generation of **polyurethane reactive (PUR) adhesives** are being introduced to the automotive industry. The relatively young generation of polyolefin reactive (POR) hotmelts is a perfect addition, rather than an alternative, to PUR hotmelts in the fabrication of automotive sandwich structures. 6 Refs.
- CC 815.1.1 Organic Polymers; 415 Metals, Plastics, Wood and Other Structural Materials; 432 Highway Transportation; 804.1 Organic Components; 538.1 Metal Bonding
- CT \*Polyolefins; Vehicles; Sandwich structures; Bonding;  
**Polyurethanes; Adhesives**
- ST Hotmelts
- L64 ANSWER 6 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN
- AN 2001:128295 HCPLUS
- DN 134:179651
- ED Entered STN: 21 Feb 2001
- TI Waterproofing protective film-bonded structures and their manufacture
- IN Iizuka, Hiroshi; Matsuura, Seiji; Kauchi, Kakutaro

PA Suntechno Chemical Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C09J005-04  
 ICS B32B027-38; E02B005-02; E04D005-10; B29C065-48; B29L009-00  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 58

## FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001049202	A2	20010220	JP 1999-228369	19990812
PRAI	JP 1999-228369			19990812	

## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	JP 2001049202	ICM C09J005-04	
		ICS B32B027-38; E02B005-02; E04D005-10; B29C065-48;	
		B29L009-00	

AB Title structures, e.g. bridges, floors, **roofs**, and walls, are manufactured by bonding curable epoxy resin-coated structures, with films coated with curable urethanes, curable urethane-ureas, and/or curable ureas as **adhesives** before the **adhesives** are cured in such a way that the coated polymers face each other.) Alternatively, base structures and/or films may be coated with curable urethanes, curable urethane-ureas, and/or curable ureas. Thus, concrete plate was coated with Polyway NE Filler (epoxy resin-containing putty), bonded to Polyway Primer P 2080 (one-component moisture-curable urethane)-coated polyurethane film (prepared from 1,4-butanediol-polypropylene glycol copolymer, polypropylene glycol modified with MDI and carbodiimide-modified MDI, and additives), and cured at 23° for 2 days to show adhesion strength 2.5 MPa.

ST waterproofing polyurethane film bonding concrete; construction film **adhesive** epoxy resin polyurea; butanediol propylene glycol MDI copolymer film

IT Polyureas  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (**adhesives** and films; bonding of waterproofing films to structures for repairing and reinforcement)

IT Polyurethanes, uses  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (**adhesives**; bonding of waterproofing films to structures for repairing and reinforcement)

IT Adhesion, physical  
**Adhesives**  
 Chemically resistant materials  
 Concrete  
 Construction materials  
 Plastic films  
 Water-resistant materials  
 Wood  
 (bonding of waterproofing films to structures for repairing and reinforcement)

IT Metals, uses

Plastic foams  
Plastics, uses  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(bonding of waterproofing films to structures for repairing and reinforcement)

IT Putty  
(curable epoxy resins; bonding of waterproofing films to structures for repairing and reinforcement)

IT Reinforced plastics  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(fiber-reinforced, films; bonding of waterproofing films to structures for repairing and reinforcement)

IT Nonwoven fabrics  
Textiles  
(films reinforced by; bonding of waterproofing films to structures for repairing and reinforcement)

IT Glass fiber fabrics  
RL: MOA (Modifier or additive use); USES (Uses)  
(films reinforced by; bonding of waterproofing films to structures for repairing and reinforcement)

IT Reinforced plastics  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(glass fiber-reinforced, films; bonding of waterproofing films to structures for repairing and reinforcement)

IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(polyoxyalkylene-, block, films; bonding of waterproofing films to structures for repairing and reinforcement)

IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(polyoxyalkylene-polyurea-, films; bonding of waterproofing films to structures for repairing and reinforcement)

IT Polyureas  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(polyoxyalkylene-polyurethane-, films; bonding of waterproofing films to structures for repairing and reinforcement)

IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(polyurea-, adhesives; bonding of waterproofing films to structures for repairing and reinforcement)

IT Polyureas  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(polyurethane-, adhesives; bonding of waterproofing films to structures for repairing and reinforcement)

IT Epoxy resins, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES

(Uses)

(putty; bonding of waterproofing films to structures for repairing and reinforcement)

IT 326471-72-1P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(films; bonding of waterproofing films to structures for repairing and reinforcement)

IT 326471-72-1P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(films; bonding of waterproofing films to structures for repairing and reinforcement)

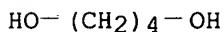
RN 326471-72-1 HCPLUS

CN 1,4-Butanediol, polymer with 1,1'-methylenebis[4-isocyanatobenzene] and 1,2-propanediol, block (9CI) (CA INDEX NAME)

CM 1

CRN 110-63-4

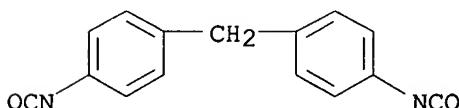
CMF C4 H10 O2



CM 2

CRN 101-68-8

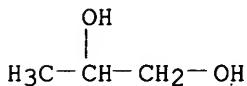
CMF C15 H10 N2 O2



CM 3

CRN 57-55-6

CMF C3 H8 O2



L64 ANSWER 7 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN

AN 2001:54353 HCPLUS

DN 134:116865

ED Entered STN: 23 Jan 2001

TI Repeelable adhesive compositions for dicing process of

semiconductor wafer  
 IN Takamiya, Hiroyuki; Nishimura, Takuaki; Akiyama, Mamoru  
 PA Nippon Synthetic Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09J004-00

ICS C09J133-00; C09J175-14

CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001019911	A2	20010123	JP 1999-195188	19990709
PRAI	JP 1999-195188			19990709	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 2001019911	ICM	C09J004-00
	ICS	C09J133-00; C09J175-14

AB The compns. with good adhesion during use and leaving no residue after debonding by UV radiation comprise: (A) a water-miscible acrylic **adhesive**, (B) a photopolymer. initiator, (C) a crosslinking agent and optionally (D) an urethane acrylate oligomer. Thus, polymerizing 80 parts Bu acrylate with 20 parts acrylic acid at 90° for 7 h, modifying the resulting copolymer with 21.5 parts isocyanatoethyl methacrylate, and neutralizing with ethanolamine gave an acrylic **adhesive** (A) with good affinity to water. Mixing 80 parts a 40% Et acetate solution of A with 20 parts a 40% MeOH solution of a pentaerythritol triacrylate- and 2,2-dimethylolpropionic acid-end-capped NCO-terminated ethylene oxide-propylene oxide block polyether polyol/IPDI copolymer ethanolamine salt (D), 1 part Irgacure 184 (B) and 2 parts a 1% Et acetate solution of Epolite 80MF (C) gave a UV-curable **adhesive** composition

ST acrylic polyurethane temporary **adhesive** semiconductor wafer dicing process; polyether polyol polyurethane acrylate temporary **adhesive**; UV curable debondable temporary **adhesive**

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (acrylic, oligomeric crosslinking agent; peelable **adhesive** compns. for dicing process of semiconductor wafer)

IT Crosslinking agents

(epoxy-containing; peelable **adhesive** compns. for dicing process of semiconductor wafer)

IT Adhesives

(peelable; peelable **adhesive** compns. for dicing process of semiconductor wafer)

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyoxyalkylene-, acrylic; peelable **adhesive** compns. for dicing process of semiconductor wafer)

IT Semiconductor device fabrication

(peelable **adhesive** compns. for dicing process of semiconductor wafer)

IT 321575-58-0P, Acrylic acid-butyl acrylate-2-isocyanatoethyl methacrylate

copolymer, ethanolamine salt 321575-61-5P 321589-38-2P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)  
(base acrylic resin; resealable adhesive compns. for dicing  
process of semiconductor wafer)

IT 52339-26-1, Epolite 80MF  
RL: MOA (Modifier or additive use); USES (Uses)  
(crosslinking agent; resealable adhesive compns. for dicing  
process of semiconductor wafer)

IT 818-61-1DP, 2-Hydroxyethyl acrylate, compound with isocyanate-terminated  
oligo-urethanes 3524-68-3DP, Pentaerythritol triacrylate,  
polyoxyalkylene-polyurethane block copolymer single end-capped with,  
urethane derivs. with dimethylolpropionic acid 4098-71-9DP, IPDI,  
polymer with ethylene oxide-propylene oxide block copolymer polyol,  
urethane derivs. with dimethylolpropionic acid and pentaerythritol  
triacrylate 4767-03-7DP, 2,2-Dimethylolpropionic acid,  
polyoxyalkylene-polyurethane block copolymer single end-capped with,  
urethane derivs. with pentaerythritol triacrylate 106392-12-5DP,  
Ethylene oxide-propylene oxide block copolymer, polyol derivs., polymer  
with IPDI, urethane derivs. with dimethylolpropionic acid and  
pentaerythritol triacrylate 321575-62-6DP, compound with  
pentaerythritol triacrylate 321575-64-8DP, compound with  
2-hydroxyethyl acrylate  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
(Preparation); USES (Uses)  
(oligomeric crosslinking agent; resealable adhesive compns.  
for dicing process of semiconductor wafer)

IT 947-19-3, Irgacure 184 24650-42-8, Irgacure 651  
RL: CAT (Catalyst use); USES (Uses)  
(photoinitiator; resealable adhesive compns. for dicing  
process of semiconductor wafer)

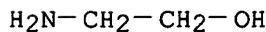
IT 321575-62-6DP, compound with pentaerythritol triacrylate  
321575-64-8DP, compound with 2-hydroxyethyl acrylate  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
(Preparation); USES (Uses)  
(oligomeric crosslinking agent; resealable adhesive compns.  
for dicing process of semiconductor wafer)

RN 321575-62-6 HCAPLUS

CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with  
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, compd. with  
2-aminoethanol (9CI) (CA INDEX NAME)

CM 1

CRN 141-43-5  
CMF C2 H7 N O

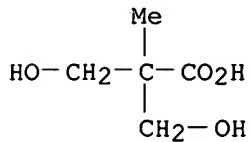


CM 2

CRN 67244-85-3  
CMF (C12 H18 N2 O2 . C5 H10 O4)x  
CCI PMS

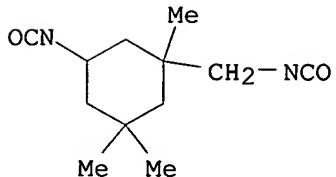
CM 3

CRN 4767-03-7  
CMF C5 H10 O4



CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2

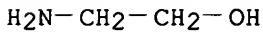


RN 321575-64-8 HCPLUS

CN 1-Propanesulfonic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, compd. with 2-aminoethanol (9CI) (CA INDEX NAME)

CM 1

CRN 141-43-5  
CMF C2 H7 N O

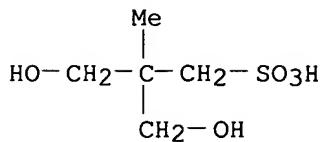


CM 2

CRN 321575-63-7  
CMF (C12 H18 N2 O2 . C5 H12 O5 S)x  
CCI PMS

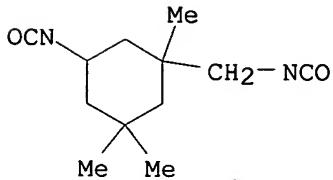
CM 3

CRN 312966-84-0  
CMF C5 H12 O5 S



CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2



- L64 ANSWER 8 OF 48 COMPENDEX COPYRIGHT 2004 EEI on STN  
AN 2001(43):3201 COMPENDEX  
TI The use of sealants in **roofing**.  
AU Schaack, K. (Price Consulting Inc., Houston, TX, United States)  
SO Interface (Raleigh, North Carolina) v 19 n 5 2001.p 27-36  
CODEN: ITERFR  
PY 2001  
DT Journal  
TC Theoretical  
LA English  
AB The use of sealants in **roof** construction was discussed. Sealants find application in caulk troughs of surface-mounted termination bars, penetration bonnets, coping stone joints, lap joints in sheet metal fabrication, fillers in pitch pans, and in-seam sealers in metal panels. Different types of sealants currently utilized in **roofing** installations include silicones, **Polyurethanes** and butyl. (Edited abstract) 2 Refs.  
CC 818 Rubber and Elastomers; 402 Buildings and Towers; 818.2 Elastomers; 408.2 Structural Members and Shapes; 818.5 Rubber Products; 411 Bituminous Materials  
CT \*Sealants; Hardening; Shrinkage; Wear resistance; Service life; Bituminous materials; Silicones; **Polyurethanes**; Roofs; Elastomers; Joints (structural components); Fits and tolerances; **Adhesives**  
ST Elastomeric sealants
- L64 ANSWER 9 OF 48 RAPRA COPYRIGHT 2004 RAPRA on STN  
AN R:791871 RAPRA FS Rapra Abstracts; Adhesives Abstracts  
TI **ADHESIVES, COATINGS AND ELASTOMERS.** ACE PRODUCT LINE.  
CS Huntsman **Polyurethanes**  
SO Auburn, Mi., 2000, pp.7. 28cms. 12/10/2000  
PY 2000  
DT Company Publication  
LA English

AB Huntsman **Polyurethanes** specialises in the chemistry, technology and manufacture of products for the **urethane** market. Product lines include Rubinate **isocyanates** and Jeffol polyols, which can be used in **adhesives**, sealants, and coatings, as well as for crosslinking and priming applications. **Isocyanate** prepolymers and polyols are also used as two-component systems for cast elastomers, potting compounds, spray polyurea and rubber crumb. All products offer low viscosity, light colour, low-temperature storage stability, controlled reactivity, and enhanced chemical resistance. Properties data are tabulated for each grade and indications given of recommended applications.

CC 33C6; 33L5; 43C6; 6A1

SC \*IA; KT; QB  
\*ADANJ

CT **ADHESIVE; APPLICATION; AQUEOUS ADHESIVE; AUTOMOTIVE APPLICATION; BRIDGE; BUILDING APPLICATION; CASTING; CHEMICAL PROPERTIES; CHEMICAL RESISTANCE; CHEMICAL RESISTANT; COATING; COMPANIES; COMPANY; CONSTRUCTION; CROSSLINKING; CRUMB RUBBER; CURING; CURING AGENT; DATA; ELASTOMER; ENCAPSULANT; FLOOR; FLOORING; FUNCTIONALITY; GLAZING; HOT MELT ADHESIVE; LAMINATING; LATEX; LATICES; LOW TEMPERATURE; MOISTURE CURING; MOLEC.WT.; MOLECULAR MASS; MOLECULAR WEIGHT; ONE-COMPONENT; PACKAGING; PACKAGING ADHESIVE; PIPE; PLASTIC; POLYPROPYLENE GLYCOL; POLYUREA; POLYURETHANE; POTTING COMPOUND; PREPOLYMER; PRIMER; PROPERTIES; PROPYLENE GLYCOL POLYMER; PU; REACTIVITY; RHEOLOGICAL PROPERTIES; ROOFING; RUBBER; SEALANT; SINGLE-COMPONENT; STABILITY; STRUCTURAL ADHESIVE; STRUCTURAL SEALANT; TABLES; THERMOPLASTIC; THERMOSET; TWO-COMPONENT; TWO-PART; URETHANE POLYMER; VISCOSITY; WATER-BASED; WATER-BORNE; WIRE COATING; WOODWORKING**

NPT DIETHYLENE GLYCOL; DIPHENYLMETHANE DIISOCYANATE; GLYCERIN; GLYCERINE; GLYCEROL; ISOCYANATE; MDI; POLYOL; SORBITOL; SUCROSE; URETONIMINE

SHR COMPANY INFORMATION, Huntsman **Polyurethanes**, PU, **isocyanates**, polyols, **adhesives**; **URETHANE POLYMERS**, company information, **isocyanates**, polyols, **adhesives**; **ISOCYANATES**, company information, PU; **POLYOLS**, company information, PU; **ADHESIVES**, company information, PU

SHA COMPANY INFORMATION, Huntsman **Polyurethanes**, PU; **URETHANE POLYMERS**, company information; **SEALANTS**, company information, PU

GT USA

TN RUBINATE M; RUBINATE TDI; RUBINATE 44; RUBINATE 1209; RUBINATE 1234; RUBINATE 1670; RUBINATE 1680; RUBINATE 1790; RUBINATE 1820; RUBINATE 1920; RUBINATE 9016; RUBINATE 9040; RUBINATE 9043; RUBINATE 9234; RUBINATE 9236; RUBINATE 9257; RUBINATE 9258; RUBINATE 9259; RUBINATE 9271; RUBINATE 9272; RUBINATE 9433; RUBINATE 9448; RUBINATE 9456; RUBINATE 9457; RUBINATE 9459; RUBINATE 9465; RUBINATE 9480; RUBINATE 9483; RUBINATE 9484; RUBINATE 9485; RUBINATE 9495; JEFFOL PPG-230; JEFFOL PPG-400; JEFFOL PPG-1000; JEFFOL PPG-2000; JEFFOL PPG-3000; JEFFOL PPG-3703; JEFFOL PPG-3706; JEFFOL PPG-3709; JEFFOL G-30-650; JEFFOL G-30-241; JEFFOL G-30-167; JEFFOL G-30-56; JEFFOL G-30-34; JEFFOL G-31-120; JEFFOL G-31-55; JEFFOL G-31-43; JEFFOL G-31-36; JEFFOL G-31-35; JEFFOL G-31-34; JEFFOL G-31-28; JEFFOL A-770; JEFFOL AD-500; JEFFOL AD-395; JEFFOL AD-310; JEFFOL A-350; JEFFOL S-490; JEFFOL SD-495; JEFFOL SD-441; JEFFOL SA-311

DN 133:74999  
 ED Entered STN: 30 Jun 2000  
 TI One-component, solvent-free, moisture-curable **adhesive**  
 containing a silylated polymer for **roofing** insulation  
 IN Wood, James Fredrick; Wang, Xiaobin; Kubish, Scott  
 PA Adco Products, Inc., USA  
 SO PCT Int. Appl., 18 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C08G065-336  
 ICS C08G018-10; C08G018-08; C09J201-10  
 CC 38-3 (Plastics Fabrication and Uses)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000037534	A1	20000629	WO 1999-US30941	19991222
	W: AU, CA				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRAI US 1998-113301P P 19981222

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000037534	ICM	C08G065-336
		ICS C08G018-10; C08G018-08; C09J201-10

AB A title **adhesive** comprises (a) a silylated polymer selected from silylated **polyurethanes** and silylated polyethers, and (b) an extender selected from coal tar, aromatic oils, and hydrocarbon resins. The **adhesive** composition preferably includes a plasticizer such as diundecyl phthalate, a moisture scavenger, preferably 4,4-diphenylmethane diisocyanate, and a **catalyst** such as dibutyltin diacetate. A method of adhering **roofing** insulation to a **roof** deck comprises applying an **adhesive** to a **roof** deck, placing insulation in contact with the **adhesive** and curing the **adhesive** composition. Thus, 23.43 weight% silylated polymer was added to the homogeneous mixture of 54.66 weight% RT 7 coal tar, 19.52 weight% diundecyl phthalate, 2.15 weight% Isonate 500P (MDI) and 0.007 weight% Dabco BL 19 having moisture level .apprx.400 ppm, mixed until homogeneous, mixed with 0.12 weight% of Metacure T 1 and 0.12 weight% of Polycat DBU, and then continuously mixed under vacuum  $\geq$ 20 in. for 30-60 min to obtain an **adhesive** composition. The **adhesive** applied to concrete and used to secure isocyanurate and wood fiberboard **roofing** insulation failed cohesively at 139 and 109 g/cm<sup>2</sup>, resp. Metal/plywood samples bonded with the above **adhesive** and aged at 22° and 30% relative humidity had **adhesive** strength (Instron, 2 in/min) 162, 316, 605, 717 and 970 g/cm<sup>2</sup> in 15, 30, 60, 120 and 240 min resp.

ST silylated polymer moisture curable insulation **adhesive**; coal tar extender silylated polymer **adhesive**; diundecyl phthalate plasticizer one component **adhesive**; diphenylmethane diisocyanate moisture scavenger **roofing** insulation **adhesive**

IT Coal tar  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (extender for **adhesive**, RT 7; moisture-curable  
**adhesive** containing a silylated polymer for bonding **roofing** insulation)

IT Aromatic oils (hydrocarbons)  
 RL: TEM (Technical or engineered material use); USES (Uses)

(extender for **adhesive**; moisture-curable **adhesive**  
containing a silylated polymer for bonding **roofing** insulation)

IT Crosslinking **catalysts**  
Plasticizers  
**Roofing**  
Thermal insulators  
(moisture-curable **adhesive** containing a silylated polymer for  
bonding **roofing** insulation)

IT **Adhesives**  
(moisture-curable; moisture-curable **adhesive** containing a  
silylated polymer for bonding **roofing** insulation)

IT Solvents  
(plasticizer; moisture-curable **adhesive** containing a silylated  
polymer for bonding **roofing** insulation)

IT Phosphates, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(plasticizer; moisture-curable **adhesive** containing a silylated  
polymer for bonding **roofing** insulation)

IT Esters, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(polymers, plasticizer; moisture-curable **adhesive** containing a  
silylated polymer for bonding **roofing** insulation)

IT Hydrocarbons, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(resins, extender for **adhesive**; moisture-curable  
**adhesive** containing a silylated polymer for bonding **roofing**  
insulation)

IT Polyethers, uses  
**Polyurethanes**, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)  
(silylated; moisture-curable **adhesive** containing a silylated  
polymer for bonding **roofing** insulation)

IT 1067-33-0, Metacure T 1 3033-62-3, Dabco BL 19 6674-22-2, Polycat DBU  
RL: **CAT (Catalyst use)**; USES (Uses)  
(crosslinking **catalyst**; moisture-curable **adhesive**  
containing a silylated polymer for bonding **roofing** insulation)

IT 101-68-8, MDI 204143-04-4, 500P  
RL: MOA (Modifier or additive use); USES (Uses)  
(moisture scavenger; moisture-curable **adhesive** containing a  
silylated polymer for bonding **roofing** insulation)

IT 3648-20-2, Diundecyl phthalate  
RL: MOA (Modifier or additive use); USES (Uses)  
(plasticizer; moisture-curable **adhesive** containing a silylated  
polymer for bonding **roofing** insulation)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Kanegafuchi Chemical Industry; EP 0336431 A 1989 HCPLUS
- (2) Kanegafuchi Chemical Industry; EP 0844282 A 1998 HCPLUS
- (3) Konishi; JP 07188641 A 1995 HCPLUS
- (4) Simson; EP 0819749 A 1998 HCPLUS

L64 ANSWER 11 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:718238 HCPLUS  
DN 133:297345  
ED Entered STN: 11 Oct 2000  
TI Two component polyurethane construction **adhesive**  
IN Murray, Pat L.  
PA Polyfoam Products, Inc., USA

SO U.S., 11 pp., Cont.-in-part of U.S. 5,951,796.

CODEN: USXXAM

DT Patent

LA English

IC ICM C08G018-48

NCL 521131000

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6130268	A	20001010	US 1999-325980	19990604
	US 5951796	A	19990914	US 1997-880465	19970623
PRAI	US 1997-880465	A2	19970623		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6130268	ICM	C08G018-48
	NCL	521131000

AB The **adhesive** is the reaction product of 2 sep. components that are mixed together immediately prior to application upon dispensing onto a substrate. The first part may be either an NCO-terminated prepolymer or a polymeric MDI (methylene di-Ph diisocyanate). The second part is a blend of rigid, elastomeric, and flexible polyols and extenders. The **adhesive** formed by mixing the A-side and B-side components, is a frothing foam that has a consistency such that it does not run or drip when applied to the substrate, that expands upon application to the substrate surface to fill voids or imperfections, that collapses when the material to be bonded is placed in contact with the **adhesive**, and has a rapid cure time. An **adhesive** was prepared from Rubinate M, Poly G30-168, Poly G74-376, and diethylene glycol.

ST polyether polyurethane construction **adhesive**

IT Shingles (roofing)

(asphalt; two-component polyurethane construction **adhesive** for)

IT Cement (construction material)

(blocks; two-component polyurethane construction **adhesive** for)

IT Thermal insulators

(boards; two-component polyurethane construction **adhesive** for)

IT Bricks

(decorative; two-component polyurethane construction **adhesive** for)

IT Polyurethanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(polyoxyalkylene-; two-component polyurethane construction **adhesive**)IT **Adhesives**(polyurethanes; two-component polyurethane construction **adhesive**)IT **Adhesive bonding**

Tiles

(two-component polyurethane construction **adhesive**)

IT 300714-54-9, Rubinate M-Poly G30-168-Poly G74-376-diethylene glycol copolymer 300835-03-4, Crude MDI-Poly G30-168-Poly G32-56-Poly G55-56-diethylene glycol copolymer

RL: TEM (Technical or engineered material use); USES (Uses)  
(two-component polyurethane construction **adhesive**)

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; The Condensed Chemical Dictionary, Tenth Ed 1981, P20
- (2) Bartlett; US 5409962 1995 HCPLUS
- (3) Dantinne; US 5294358 1994 HCPLUS
- (4) Green; US 5455283 1995 HCPLUS
- (5) Gusmer; US 4170440 1979
- (6) Gusmer; US 4199303 1980
- (7) Johnson; US 4636425 1987
- (8) Kluth; US 4489176 1984 HCPLUS
- (9) Krueger; US 5296516 1994 HCPLUS
- (10) Murray; US 5362342 1994
- (11) Rabito; US 4444976 1984 HCPLUS
- (12) Ryoshi; US 5575871 1996
- (13) Venable; US 4996812 1991
- (14) Wencley; US 4244901 1981
- (15) Yu-Hallada; US 5318996 1994 HCPLUS

IT 300714-54-9, Rubinate M-Poly G30-168-Poly G74-376-diethylene glycol copolymer 300835-03-4, Crude MDI-Poly G30-168-Poly G32-56-Poly G55-56-diethylene glycol copolymer

RL: TEM (Technical or engineered material use); USES (Uses)  
(two-component polyurethane construction adhesive)

RN 300714-54-9 HCPLUS

CN Isocyanic acid, polymethylenepolyphenylene ester, polymer with 2,2'-oxybis[ethanol], Poly-G 74-376 and  $\alpha,\alpha',\alpha''$ -1,2,3-propanetriyltris[ $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

CM 1

CRN 136752-93-7

CMF Unspecified

CCI PMS, MAN

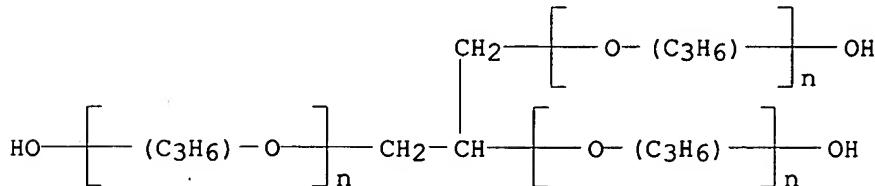
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 25791-96-2

CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>

CCI IDS, PMS



CM 3

CRN 9016-87-9

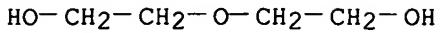
CMF Unspecified

CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

CRN 111-46-6  
CMF C4 H10 O3



RN 300835-03-4 HCAPLUS

CN Isocyanic acid, polymethylenepolyphenylene ester, polymer with methyloxirane polymer with oxirane ether with 1,2,3-propanetriol (3:1), 2,2'-oxybis[ethanol], Poly-G 55-56 and  $\alpha,\alpha',\alpha''$ -1,2,3-propanetriyltris[ $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

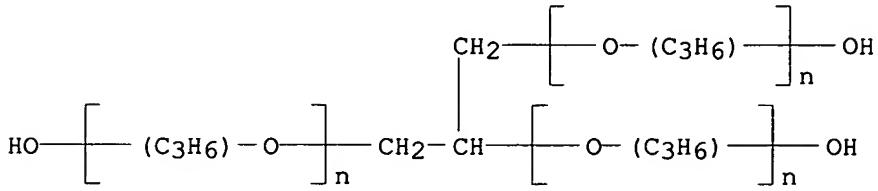
CM 1

CRN 110279-10-2  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 25791-96-2  
CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>  
CCI IDS, PMS



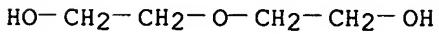
CM 3

CRN 9016-87-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

CRN 111-46-6  
CMF C4 H10 O3

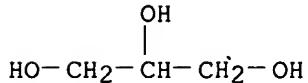


CM 5

CRN 9082-00-2  
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 6

CRN 56-81-5  
CMF C3 H8 O3

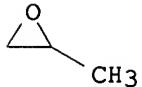


CM 7

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 8

CRN 75-56-9  
CMF C3 H6 O



CM 9

CRN 75-21-8  
CMF C2 H4 O



L64 ANSWER 12 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:865467 HCPLUS  
DN 134:43096  
ED Entered STN: 12 Dec 2000  
TI Radiation-cured peelable hydrophilic acrylic **adhesive** for semiconductor wafer dicing  
IN Takamiya, Hiroyuki; Nishimura, Takuro; Akiyama, Mamoru  
PA Nippon Synthetic Chemical Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp:  
CODEN: JKXXAF  
DT Patent  
LA Japanese

IC ICM C09J133-00  
 ICS C09J175-14  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 76

## FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000345131	A2	20001212	JP 1999-156082	19990603
PRAI	JP 1999-156082				

## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	JP 2000345131	ICM	C09J133-00
			ICS C09J175-14

AB Title peelable **adhesive** with good contamination resistance comprises (A) hydrophilic acrylic **adhesives**, (B) radiation-curable compds., (C) photopolymn. initiators, and (D) crosslinking agents. Thus, a composition comprising acrylic acid-Bu acrylate-2-hydroxyethyl acrylate-vinyl acetate copolymer solution 50, 2,2-dimethylolpropionic acid-ethylene oxide-isophorone diisocyanate-pentaerythritol triacrylate-propylene oxide block copolymer 50, Irgacure® 184 1, and epoxy compound Epolite 80 MF 2 parts, gave a peelable **adhesive**.

ST acrylic polyurethane epoxy resin peelable **adhesive** semiconductor wafer dicing

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (acrylic-epoxy; preparation of radiation-cured peelable hydrophilic acrylic **adhesive** for semiconductor wafer dicing)

IT Epoxy resins, uses

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (acrylic-polyurethane-; preparation of radiation-cured peelable hydrophilic acrylic **adhesive** for semiconductor wafer dicing)

IT Adhesives

(peelable; preparation of radiation-cured peelable hydrophilic acrylic **adhesive** for semiconductor wafer dicing)

IT Crosslinking catalysts

(photochem.; preparation of radiation-cured peelable hydrophilic acrylic **adhesive** for semiconductor wafer dicing)

IT Adhesives

(photocurable; preparation of radiation-cured peelable hydrophilic acrylic **adhesive** for semiconductor wafer dicing)

IT Semiconductor device fabrication

Semiconductor materials

(preparation of radiation-cured peelable hydrophilic acrylic **adhesive** for semiconductor wafer dicing)

IT Glass, miscellaneous

RL: MSC (Miscellaneous)

(preparation of radiation-cured peelable hydrophilic acrylic **adhesive** for semiconductor wafer dicing)

IT 947-19-3, Irgacure 184 24650-42-8, Irgacure 651

RL: CAT (Catalyst use); USES (Uses)

(preparation of radiation-cured peelable hydrophilic acrylic **adhesive** for semiconductor wafer dicing)

IT 312966-58-8P 312966-63-5P 312966-67-9P

**312966-73-7P**

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(preparation of radiation-cured peelable hydrophilic acrylic adhesive for semiconductor wafer dicing)

IT 7440-21-3, Silicon, miscellaneous 12597-68-1, Stainless steel, miscellaneous

RL: MSC (Miscellaneous)

(preparation of radiation-cured peelable hydrophilic acrylic adhesive for semiconductor wafer dicing)

IT 141-43-5, Ethanol amine, uses 312966-79-3 312966-86-2

RL: NUU (Other use, unclassified); USES (Uses)

(preparation of radiation-cured peelable hydrophilic acrylic adhesive for semiconductor wafer dicing)

IT 312966-58-8P 312966-63-5P 312966-67-9P

**312966-73-7P**

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(preparation of radiation-cured peelable hydrophilic acrylic adhesive for semiconductor wafer dicing)

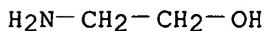
RN 312966-58-8 HCAPLUS

CN 2-Propenoic acid, polymer with 1,3-bis(oxiranylmethoxy)-2-propanol, butyl 2-propenoate, ethenyl acetate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2-(hydroxymethyl)-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-methoxyethyl 2-propenoate, methyloxirane and oxirane, compd. with 2-aminoethanol (9CI) (CA INDEX NAME)

CM 1

CRN 141-43-5

CMF C2 H7 N O



CM 2

CRN 312966-57-7

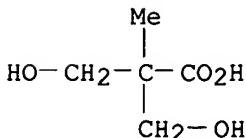
CMF (C14 H18 O7 . C12 H18 N2 O2 . C9 H16 O5 . C7 H12 O2 . C6 H10 O3 . C5 H10 O4 . C4 H6 O2 . C3 H6 O . C3 H4 O2 . C2 H4 O)x

CCI PMS

CM 3

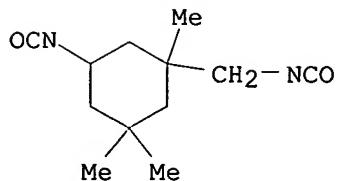
CRN 4767-03-7

CMF C5 H10 O4



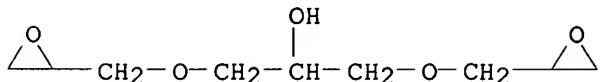
CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2



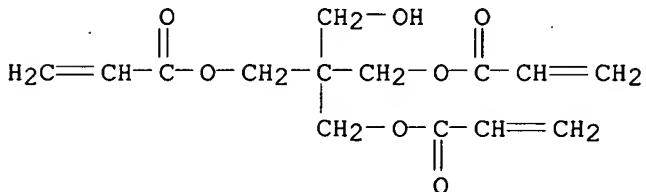
CM 5

CRN 3568-29-4  
CMF C9 H16 O5



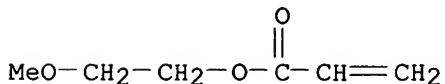
CM 6

CRN 3524-68-3  
CMF C14 H18 O7



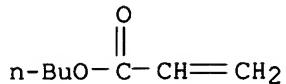
CM 7

CRN 3121-61-7  
CMF C6 H10 O3



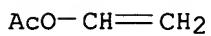
CM 8

CRN 141-32-2  
CMF C7 H12 O2



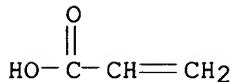
CM 9

CRN 108-05-4  
CMF C4 H6 O2



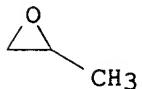
CM 10

CRN 79-10-7  
CMF C3 H4 O2



CM 11

CRN 75-56-9  
CMF C3 H6 O



CM 12

CRN 75-21-8  
CMF C2 H4 O



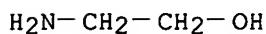
RN 312966-63-5 HCPLUS  
CN 2-Propenoic acid, polymer with 1,3-bis(oxiranylmethoxy)-2-propanol, butyl 2-propenoate, ethenyl acetate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2-(hydroxymethyl)-2-[(1-oxo-2-propenyl)oxy]methyl]-

1,3-propanediyl di-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, methyloxirane and oxirane, compd. with 2-aminoethanol (9CI) (CA INDEX NAME)

CM 1

CRN 141-43-5

CMF C2 H7 N O



CM 2

CRN 312966-62-4

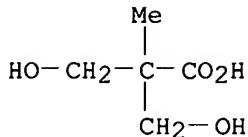
CMF (C14 H18 O7 . C12 H18 N2 O2 . C9 H16 O5 . C7 H12 O2 . C5 H10 O4 . C4 H6 O2 . C3 H6 O . C3 H4 O2 . C2 H4 O)x

CCI PMS

CM 3

CRN 4767-03-7

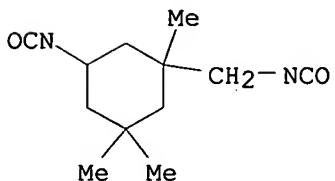
CMF C5 H10 O4



CM 4

CRN 4098-71-9

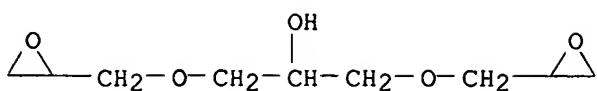
CMF C12 H18 N2 O2



CM 5

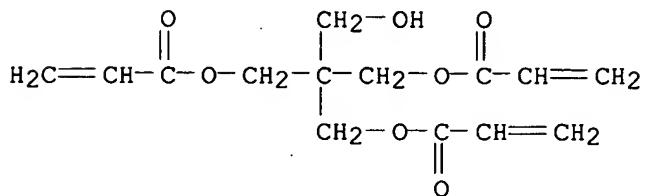
CRN 3568-29-4

CMF C9 H16 O5



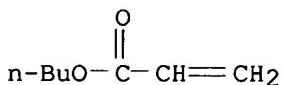
CM 6

CRN 3524-68-3  
CMF C14 H18 O7



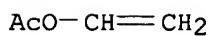
CM 7

CRN 141-32-2  
CMF C7 H12 O2



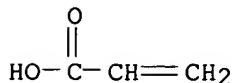
CM 8

CRN 108-05-4  
CMF C4 H6 O2



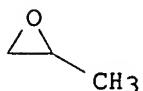
CM 9

CRN 79-10-7  
CMF C3 H4 O2



CM 10

CRN 75-56-9  
CMF C3 H6 O



CM 11

CRN 75-21-8  
CMF C2 H4 O

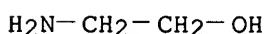


RN 312966-67-9 HCAPLUS

CN Hexanedioic acid, polymer with 1,3-bis(oxiranylmethoxy)-2-propanol, butyl 2-propenoate, 1,2-ethanediol, ethenyl acetate, 2-hydroxyethyl 2-propenoate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2-(hydroxymethyl)-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2-propenoic acid, compd. with 2-aminoethanol (9CI) (CA INDEX NAME)

CM 1

CRN 141-43-5  
CMF C2 H7 N O

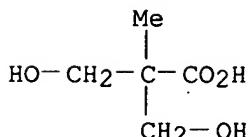


CM 2

CRN 312966-66-8  
CMF (C14 H18 O7 . C12 H18 N2 O2 . C9 H16 O5 . C7 H12 O2 . C6 H10 O4 . C5 H10 O4 . C5 H8 O3 . C4 H6 O2 . C3 H4 O2 . C2 H6 O2)x  
CCI PMS

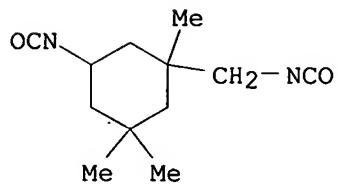
CM 3

CRN 4767-03-7  
CMF C5 H10 O4



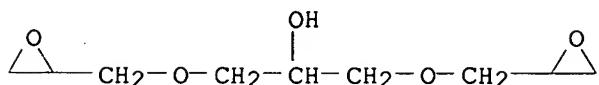
CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2



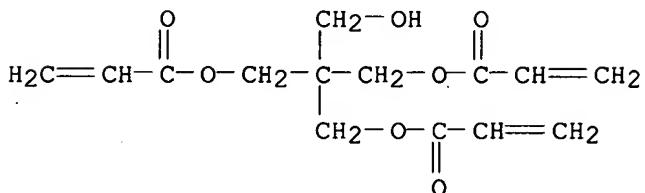
CM 5

CRN 3568-29-4  
CMF C9 H16 O5



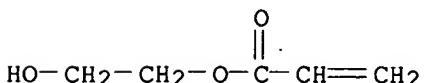
CM 6

CRN 3524-68-3  
CMF C14 H18 O7



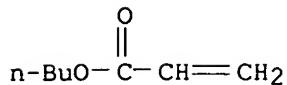
CM 7

CRN 818-61-1  
CMF C5 H8 O3



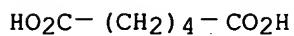
CM 8

CRN 141-32-2  
CMF C7 H12 O2



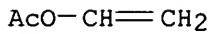
CM 9

CRN 124-04-9  
CMF C6 H10 O4



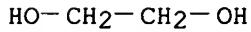
CM 10

CRN 108-05-4  
CMF C4 H6 O2



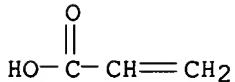
CM 11

CRN 107-21-1  
CMF C2 H6 O2



CM 12

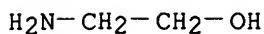
CRN 79-10-7  
CMF C3 H4 O2



RN 312966-73-7 HCPLUS  
CN 2-Propenoic acid, polymer with 1,3-bis(oxiranylmethoxy)-2-propanol, butyl 2-propenoate, ethenyl acetate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2-(hydroxymethyl)-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2-methoxyethyl 2-propenoate, compd. with 2-aminoethanol (9CI) (CA INDEX NAME)

CM 1

CRN 141-43-5  
CMF C2 H7 N O

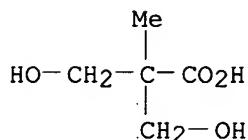


CM 2

CRN 312966-72-6  
CMF (C<sub>14</sub> H<sub>18</sub> O<sub>7</sub> . C<sub>12</sub> H<sub>18</sub> N<sub>2</sub> O<sub>2</sub> . C<sub>9</sub> H<sub>16</sub> O<sub>5</sub> . C<sub>7</sub> H<sub>12</sub> O<sub>2</sub> . C<sub>6</sub> H<sub>10</sub> O<sub>3</sub> . C<sub>5</sub> H<sub>10</sub> O<sub>4</sub> . C<sub>4</sub> H<sub>6</sub> O<sub>2</sub> . C<sub>3</sub> H<sub>4</sub> O<sub>2</sub>)<sub>x</sub>  
CCI PMS

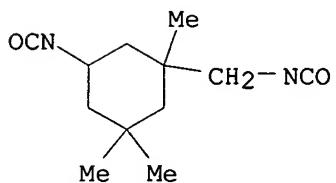
CM 3

CRN 4767-03-7  
CMF C<sub>5</sub> H<sub>10</sub> O<sub>4</sub>



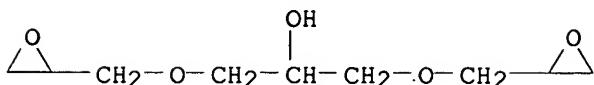
CM 4

CRN 4098-71-9  
CMF C<sub>12</sub> H<sub>18</sub> N<sub>2</sub> O<sub>2</sub>



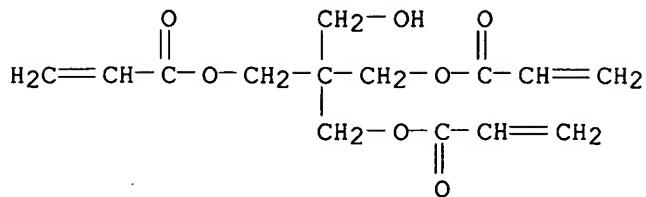
CM 5

CRN 3568-29-4  
CMF C<sub>9</sub> H<sub>16</sub> O<sub>5</sub>



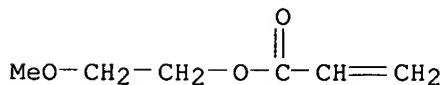
CM 6

CRN 3524-68-3  
CMF C14 H18 O7



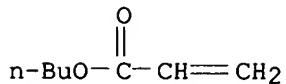
CM 7

CRN 3121-61-7  
CMF C6 H10 O3



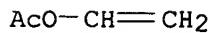
CM 8

CRN 141-32-2  
CMF C7 H12 O2



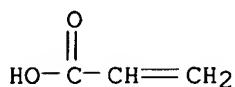
CM 9

CRN 108-05-4  
CMF C4 H6 O2



CM 10

CRN 79-10-7  
CMF C3 H4 O2



IT 312966-79-3 312966-86-2

RL: NUU (Other use, unclassified); USES (Uses)  
(preparation of radiation-cured peelable hydrophilic acrylic  
adhesive for semiconductor wafer dicing)

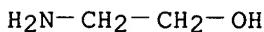
RN 312966-79-3 HCAPLUS

CN 2-Propenoic acid, polymer with 1,3-bis(oxiranylmethoxy)-2-propanol, butyl  
2-propenoate, ethenyl acetate, 2-(hydroxymethyl)-2-[(1-oxo-2-  
propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 5-isocyanato-1-  
(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-methoxyethyl  
2-propenoate, methyloxirane and oxirane, compd. with 2-aminoethanol (9CI)  
(CA INDEX NAME)

CM 1.

CRN 141-43-5

CMF C2 H7 N O



CM 2

CRN 312966-78-2

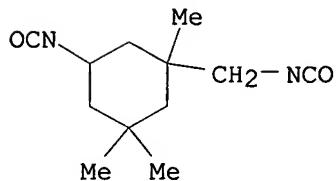
CMF (C14 H18 O7 . C12 H18 N2 O2 . C9 H16 O5 . C7 H12 O2 . C6 H10 O3 . C4  
H6 O2 . C3 H6 O . C3 H4 O2 . C2 H4 O)x

CCI PMS

CM 3

CRN 4098-71-9

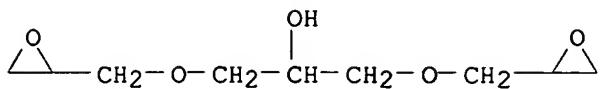
CMF C12 H18 N2 O2



CM 4

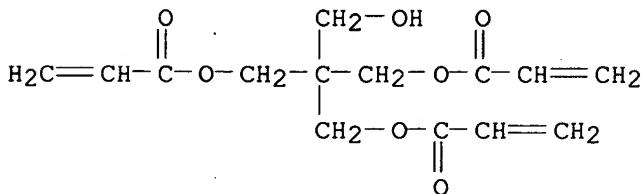
CRN 3568-29-4

CMF C9 H16 O5



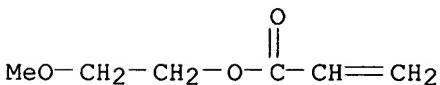
CM 5

CRN 3524-68-3  
CMF C14 H18 O7



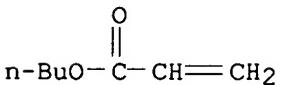
CM 6

CRN 3121-61-7  
CMF C6 H10 O3



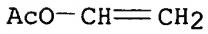
CM 7

CRN 141-32-2  
CMF C7 H12 O2



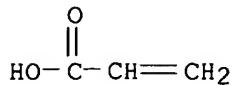
CM 8

CRN 108-05-4  
CMF C4 H6 O2



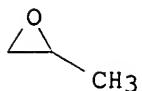
CM 9

CRN 79-10-7  
CMF C3 H4 O2



CM 10

CRN 75-56-9  
CMF C3 H6 O



CM 11

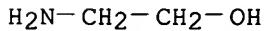
CRN 75-21-8  
CMF C2 H4 O



RN 312966-86-2 HCPLUS  
CN 2-Propenoic acid, polymer with 1,3-bis(oxiranylmethoxy)-2-propanol, butyl 2-propenoate, ethenyl acetate, 2-hydroxyethyl 2-propenoate, 3-hydroxy-2-(hydroxymethyl)-2-methyl-1-propanesulfonic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2-methoxyethyl 2-propenoate, compd. with 2-aminoethanol (9CI) (CA INDEX NAME)

CM 1

CRN 141-43-5  
CMF C2 H7 N O

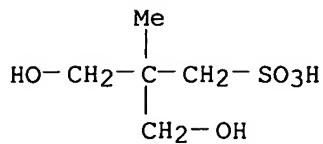


CM 2

CRN 312966-85-1  
CMF (C<sub>12</sub> H<sub>18</sub> N<sub>2</sub> O<sub>2</sub> . C<sub>9</sub> H<sub>16</sub> O<sub>5</sub> . C<sub>7</sub> H<sub>12</sub> O<sub>2</sub> . C<sub>6</sub> H<sub>10</sub> O<sub>3</sub> . C<sub>5</sub> H<sub>12</sub> O<sub>5</sub> S . C<sub>5</sub> H<sub>8</sub> O<sub>3</sub> . C<sub>4</sub> H<sub>6</sub> O<sub>2</sub> . C<sub>3</sub> H<sub>4</sub> O<sub>2</sub>)<sub>x</sub>  
CCI PMS

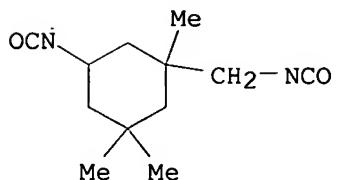
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CRN 312966-84-0  
CMF C5 H12 O5 S



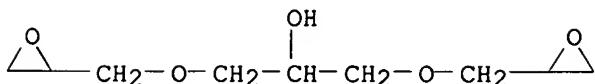
CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2



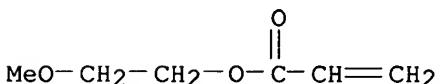
CM 5

CRN 3568-29-4  
CMF C9 H16 O5



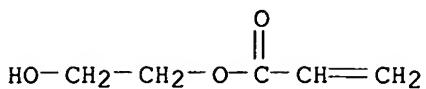
CM 6

CRN 3121-61-7  
CMF C6 H10 O3



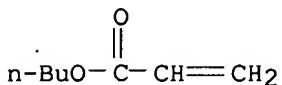
CM 7

CRN 818-61-1  
CMF C5 H8 O3



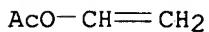
CM 8

CRN 141-32-2  
CMF C7 H12 O2



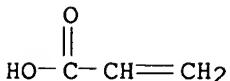
CM 9

CRN 108-05-4  
CMF C4 H6 O2



CM 10

CRN 79-10-7  
CMF C3 H4 O2



L64 ANSWER 13 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1999:113730 HCPLUS  
DN 130:183234  
ED Entered STN: 19 Feb 1999  
TI Aqueous dispersions containing polyurethanes with carbodiimide groups  
IN Beutler, Kuno; Haberle, Karl; Hummerich, Rainer; Licht, Ulrike; Kokel,  
Nicolas; Treiber, Reinhard; Kaehs, Helmut; Mossbach, Ralf; Gotz, Thomas  
PA BASF Aktiengesellschaft, Germany  
SO PCT Int. Appl., 41 pp.  
CODEN: PIXXD2  
DT Patent  
LA German  
IC ICM C08G018-79  
ICS C08G018-70; C08G018-08; C09D175-06  
CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38, 42  
FAN.CNT 3  
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	WO 9906459	A1	19990211	WO 1998-EP4483	19980720
	W: CA, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19733044	A1	19990204	DE 1997-19733044	19970731
	DE 19816528	A1	19991021	DE 1998-19816528	19980415
	EP 1002001	A1	20000524	EP 1998-941363	19980720
	EP 1002001	B1	20020327		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL				
	JP 2001512154	T2	20010821	JP 2000-505211	19980720
	AT 215102	E	20020415	AT 1998-941363	19980720
	US 6395824	B1	20020528	US 2000-463579	20000128
PRAI	DE 1997-19733044	A	19970731		
	DE 1998-19816528	A	19980415		
	WO 1998-EP4483	W	19980720		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9906459	ICM	C08G018-79
	ICS	C08G018-70; C08G018-08; C09D175-06
DE 19816528	ECLA	C08G018/08B6C; C08G018/10; C08G018/10; C08G018/10; C08G018/79G; C09D175/06; C09J175/04
US 6395824	ECLA	C08G018/08B6C; C14C011/00B2; D06M015/572; D06N003/14; E04D005/02; C08G018/08B9; C08G018/10; C08G018/10; C08G018/79G; C09D175/06; C09J175/04

AB The title polyurethane dispersions, suitable for coating, **adhesive**, or impregnation formulations, contain 5-200 mmol/kg carbodiimide (CDI) units introduced through a CDI group-containing polyisocyanate. The dispersions are stable under warm, humid conditions and retain good mech. properties. Thus, a CDI group-containing polyisocyanate (14.2% CDI groups, 10.0% NCO groups) prepared from tetramethylxylylene diisocyanate was treated with adipic acid-hexanediol-neopentyl glycol polyester polyol, isophorone diisocyanate, hexamethylene diisocyanate, Na (aminoethyl)aminoethanesulfon ate, diethylenetriamine, and isophoronediamine to give an aqueous polyurethane dispersion with 17.2 mmol/kg CDI groups and a film that had a 42% increase in tensile strength after 7 days at 70° and 90% relative humidity. A coating material formulated from this dispersion was mech. foamed, coated on a polyester spun-bonded nonwoven, and dried to give a material with water barrier property, water vapor permeability, and fire resistance comparable to that for a known sheet **roofing** material.

ST carbodiimide contg polyurethane aq dispersion; methylxylylene carbodiimide polyisocyanate polyurethane dispersion; coating carbodiimide contg polyurethane dispersion

IT Aminoplasts

RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (Saduren 163; stable aqueous dispersions with carbodiimide group-containing polyurethanes for coating textiles)

IT Polyester fibers, uses

Polyester fibers, uses

RL: TEM (Technical or engineered material use); USES (Uses) (fabrics, nonwoven; stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles)

IT Kaolin, uses

RL: MOA (Modifier or additive use); USES (Uses) (filler; stable aqueous dispersions from filled carbodiimide group-containing polyurethanes for coating textiles)

IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(nonwoven fabric; stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles)

IT Polyurethanes, preparation  
Polyurethanes, preparation  
Polyurethanes, preparation  
Polyurethanes, preparation  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polycarbodiimide-polyester-polyurea-; stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles)

IT Polyureas  
Polyureas  
Polyureas  
Polyureas  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polycarbodiimide-polyester-polyurethane-; stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles)

IT Polyesters, preparation  
Polyesters, preparation  
Polyesters, preparation  
Polyesters, preparation  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polycarbodiimide-polyurea-polyurethane-; stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles)

IT Polycarbodiimides  
Polycarbodiimides  
Polycarbodiimides  
Polycarbodiimides  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyester-polyurea-polyurethanes; stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles)

IT Nonwoven fabrics  
(polyester; stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles)

IT Leather  
Paper  
Wood  
(stable aqueous dispersions from carbodiimide group-containing polyurethanes as  
coatings or adhesives for)

IT Metals, miscellaneous  
Plastics, miscellaneous  
RL: MSC (Miscellaneous)  
(stable aqueous dispersions from carbodiimide group-containing polyurethanes as  
coatings or adhesives for)

IT Adhesives  
Coating materials  
Impregnation  
(stable aqueous dispersions from carbodiimide group-containing polyurethanes for)

IT Textiles  
(stable aqueous dispersions from carbodiimide group-containing polyurethanes

for coating textiles)

IT Roofing  
(stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles for)

IT Aminoplasts  
Phenolic resins, preparation  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(stable aqueous dispersions with carbodiimide group-containing polyurethanes for coating textiles)

IT 9003-08-1P, Melamine resin  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(Saduren 163; stable aqueous dispersions with carbodiimide group-containing polyurethanes for coating textiles)

IT 220250-34-0P, Adipic acid-diethylenetriamine-1,6-hexanediol-hexamethylene diisocyanate-isophoronediamine-isophorone diisocyanate-neopentyl glycol-sodium (aminoethyl)aminoethanesulfonate-tetramethylxylylene diisocyanate copolymer 220554-57-4P, Adipic acid-1,4-butanediol-dimethylolpropionic acid-1,6-hexanediol-isophoronediamine-isophorone diisocyanate-neopentyl glycol-tetramethylxylylene diisocyanate-copolymer triethylamine salt  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(carbodiimide group-containing; stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles)

IT 25038-59-9, Poly(ethylene terephthalate), uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(nonwoven fabric; stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles)

IT 220554-59-6P, Adipic acid-1,4-butanediol-diethylenetriamine-1,6-hexanediol-hexamethylene diisocyanate-isophoronediamine-isophorone diisocyanate-neopentyl glycol-sodium (aminoethyl)aminoethanesulfonate copolymer  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(stable aqueous dispersions with carbodiimide group-containing polyurethanes for coating textiles)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Bayer Ag; DE 2446440 A 1976 HCPLUS  
(2) Bayer Ag; EP 0198343 A 1986 HCPLUS  
(3) Fuller H B Licensing Financ; WO 9508583 A 1995 HCPLUS

IT 220250-34-0P, Adipic acid-diethylenetriamine-1,6-hexanediol-hexamethylene diisocyanate-isophoronediamine-isophorone diisocyanate-neopentyl glycol-sodium (aminoethyl)aminoethanesulfonate-tetramethylxylylene diisocyanate copolymer 220554-57-4P, Adipic acid-1,4-butanediol-dimethylolpropionic acid-1,6-hexanediol-isophoronediamine-isophorone diisocyanate-neopentyl glycol-tetramethylxylylene diisocyanate-copolymer triethylamine salt  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(carbodiimide group-containing; stable aqueous dispersions from carbodiimide group-containing polyurethanes for coating textiles)

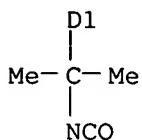
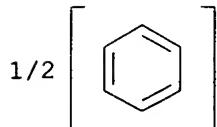
RN 220250-34-0 HCPLUS

CN Hexanedioic acid, polymer with 2-[(2-aminoethyl)amino]ethanesulfonic acid monosodium salt, N-(2-aminoethyl)-1,2-ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine, bis(1-isocyanato-1-methylethyl)benzene,

1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol and  
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA  
INDEX NAME)

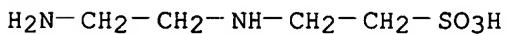
CM 1

CRN 58067-42-8  
CMF C14 H16 N2 O2  
CCI IDS



CM 2

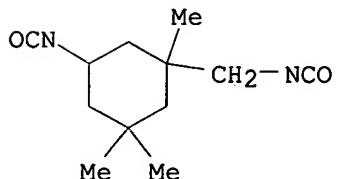
CRN 34730-59-1  
CMF C4 H12 N2 O3 S . Na



● Na

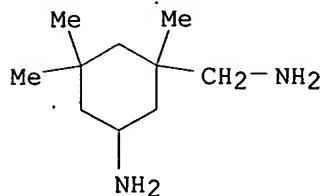
CM 3

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 4

CRN 2855-13-2  
CMF C10 H22 N2



CM 5

CRN 822-06-0  
CMF C8 H12 N2 O2

OCN-(CH<sub>2</sub>)<sub>6</sub>-NCO

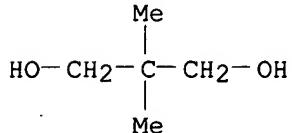
CM 6

CRN 629-11-8  
CMF C6 H14 O2

HO-(CH<sub>2</sub>)<sub>6</sub>-OH

CM 7

CRN 126-30-7  
CMF C5 H12 O2



CM 8

CRN 124-04-9  
CMF C6 H10 O4

HO<sub>2</sub>C-(CH<sub>2</sub>)<sub>4</sub>-CO<sub>2</sub>H

CM 9

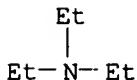
CRN 111-40-0  
CMF C4 H13 N3



RN 220554-57-4 HCPLUS  
CN Hexanedioic acid, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, bis(1-isocyanato-1-methylethyl)benzene, 1,4-butanediol, 2,2-dimethyl-1,3-propānediol, 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N

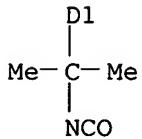
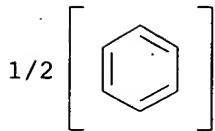


CM 2

CRN 220554-56-3  
CMF (C14 H16 N2 O2 . C12 H18 N2 O2 . C10 H22 N2 . C6 H14 O2 . C6 H10 O4 . C5 H12 O2 . C5 H10 O4 . C4 H10 O2)x  
CCI PMS

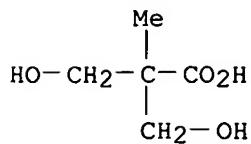
CM 3

CRN 58067-42-8  
CMF C14 H16 N2 O2  
CCI IDS



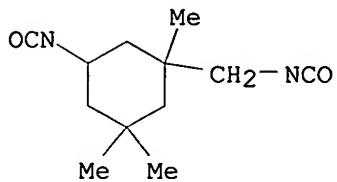
CM 4

CRN 4767-03-7  
CMF C5 H10 O4



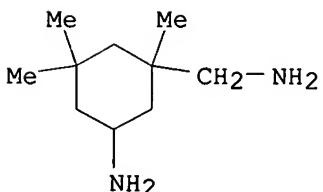
CM 5

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 6

CRN 2855-13-2  
CMF C10 H22 N2



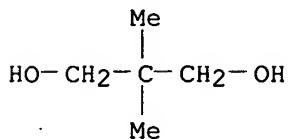
CM 7

CRN 629-11-8  
CMF C6 H14 O2

HO- (CH<sub>2</sub>)<sub>6</sub>-OH

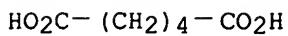
CM 8

CRN 126-30-7  
CMF C5 H12 O2



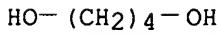
CM 9

CRN 124-04-9  
CMF C6 H10 O4



CM 10

CRN 110-63-4  
CMF C4 H10 O2



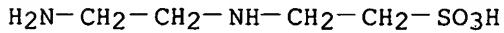
IT 220554-59-6P, Adipic acid-1,4-butanediol-diethylenetriamine-1,6-hexanediol-hexamethylene diisocyanate-isophoronediamine-isophorone diisocyanate-neopentyl glycol-sodium (aminoethyl)aminoethanesulfonate copolymer  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(stable aqueous dispersions with carbodiimide group-containing polyurethanes for coating textiles)

RN 220554-59-6 HCPLUS

CN Hexanedioic acid, polymer with 2-[(2-aminoethyl)amino]ethanesulfonic acid monosodium salt, N-(2-aminoethyl)-1,2-ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine, 1,4-butanediol, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

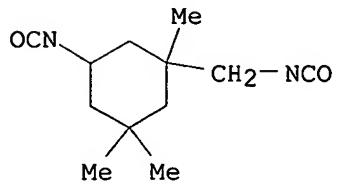
CRN 34730-59-1  
CMF C4 H12 N2 O3 S . Na



● Na

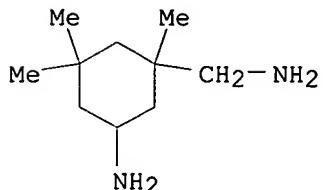
CM 2

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 3

CRN 2855-13-2  
CMF C10 H22 N2



CM 4

CRN 822-06-0  
CMF C8 H12 N2 O2

OCN-(CH<sub>2</sub>)<sub>6</sub>-NCO

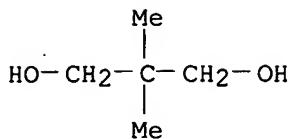
CM 5

CRN 629-11-8  
CMF C6 H14 O2

HO-(CH<sub>2</sub>)<sub>6</sub>-OH

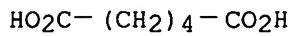
CM 6

CRN 126-30-7  
CMF C5 H12 O2



CM 7

CRN 124-04-9  
CMF C6 H10 O4



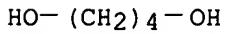
CM 8

CRN 111-40-0  
CMF C4 H13 N3



CM 9

CRN 110-63-4  
CMF C4 H10 O2



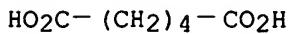
L64 ANSWER 14 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1999:650526 HCPLUS  
DN 131:272954  
ED Entered STN: 13 Oct 1999  
TI Solvent-type two-liquid polyurethane **adhesive** and its application  
IN Iijima, Hiroshi; Matsumoto, Sachio; Kamemura, Ichiro  
PA Asahi Glass Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C09J175-04  
ICS E04D005-14; E04D011-02  
CC 38-3 (Plastics Fabrication and Uses)  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11279516	A2	19991012	JP 1998-77933	19980325
PRAI JP 1998-77933		19980325		

CLASS			
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
JP 11279516	ICM	C09J175-04	
	ICS	E04D005-14; E04D011-02	
AB	The title <b>adhesive</b> , useful for fixing plastic sheets to form water-resistant <b>rooftop</b> , balcony, veranda, etc. (no data), is prepared from polyols (e.g., adipic acid-1,4-butanediol-isophthalic acid copolymer), solvents (e.g., CH <sub>2</sub> Cl <sub>2</sub> ), and 5-40% plasticizers (e.g., DOP, dioctyl adipate) as the main liquid and polyisocyanates (e.g., MDI) as hardeners.		
ST	polyurethane two liq <b>adhesive</b> plastic bonding; polyesterpolyol polyisocyanate two liq <b>adhesive</b> ; DOP plasticizer polyurethane two liq <b>adhesive</b> ; dioctyl adipate plasticizer polyurethane two liq <b>adhesive</b>		
IT	Polyurethanes, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (2-liquid <b>adhesives</b> ; solvent-type two-liquid polyurethane <b>adhesive</b> and application)		
IT	Resin acids RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (hydrogenated, esters with glycerol, Super Ester A-100, tackifiers; solvent-type two-liquid polyurethane <b>adhesive</b> and application)		
IT	Polyurethanes, uses RL: TEM (Technical or engineered material use); USES (Uses) (polyester-, <b>adhesives</b> ; solvent-type two-liquid polyurethane <b>adhesive</b> and application)		
IT	Plasticizers (solvent-type two-liquid polyurethane <b>adhesive</b> and application)		
IT	<b>Adhesives</b> (two-liquid; solvent-type two-liquid polyurethane <b>adhesive</b> and application)		
IT	<b>Adhesives</b> (water-resistant; solvent-type two-liquid polyurethane <b>adhesive</b> and application)		
IT	72276-01-8P, Adipic acid-1,4-butanediol-isophthalic acid-MDI copolymer RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (2-liquid <b>adhesives</b> ; solvent-type two-liquid polyurethane <b>adhesive</b> and application)		
IT	117-81-7, DOP 123-79-5, Dioctyl adipate RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (plasticizers; solvent-type two-liquid polyurethane <b>adhesive</b> and application)		
IT	72276-01-8P, Adipic acid-1,4-butanediol-isophthalic acid-MDI copolymer RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (2-liquid <b>adhesives</b> ; solvent-type two-liquid polyurethane <b>adhesive</b> and application)		
RN	72276-01-8 HCPLUS		
CN	1,3-Benzenedicarboxylic acid, polymer with 1,4-butanediol, hexanedioic acid and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)		

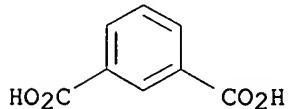
CM 1

CRN 124-04-9  
CMF C6 H10 O4



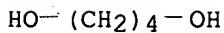
CM 2

CRN 121-91-5  
CMF C8 H6 O4



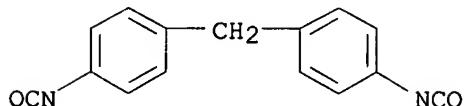
CM 3

CRN 110-63-4  
CMF C4 H10 O2



CM 4

CRN 101-68-8  
CMF C15 H10 N2 O2



L64 ANSWER 15 OF 48 JICST-EPlus COPYRIGHT 2004 JST on STN  
AN 990994500 JICST-EPlus  
TI Environment and regulations (4). Aqueous formulation (4.4). Solvent-free type (4.4.1). Reactive hotmelt **adhesive**.  
AU TOSAKI HIDEO  
CS Hitachi Kasei Polymor Co., Ltd.  
SO Setchaku no Gijutsu (Adhésion Technology Japan), (1999) vol. 19, no. 2, pp. 36-41. Journal Code: G0890B (Fig. 11, Tbl. 2, Ref. 8)  
CODEN: SGIJE7; ISSN: 0289-8225  
CY Japan  
DT Journal; Commentary  
LA Japanese  
STA New  
AB This paper introduces the features and application of reactive hotmelt

**adhesive** which has advantages of hotmelt **adhesive** such as solventless, short time adhesion, and one-component, as well as the advantages of solventless liquid reactive **adhesive** such as reactivity and heat-resistance. By the selection of crystallinity of urethane prepolymer, properties such as flexibility, open time, initial adhesion strength, and fast curing, can be controlled. Type, features, and application of the **adhesives** are described. This paper outlines package style and applicators, and introduces application examples in roof rack for automobile and building material board wrapping.

CC YK03000X (665.931/.939)  
 CT reactivity; hot melt **adhesive**; synthetic resin **adhesive**; polyurethane; crystallinity; crosslinking; solventless **adhesive**; flexibility; machining speed; strength development; **adhesive** strength; period(duration)  
 BT property; **adhesive**; polymer; degree; polymer reaction; chemical reaction; machining condition; condition; velocity; mechanical property; strength  
 ST a term of curing

L64 ANSWER 16 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN

AN 1998:115751 HCPLUS

DN 128:218097

ED Entered STN: 26 Feb 1998

TI Bonding of parts to automobile trim parts

IN Usui, Nobuo

PA Kasai Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B05D007-24

ICS B60J005-00; B60R013-02; C09J005-00

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10043680	A2	19980217	JP 1996-207312	19960806
PRAI JP 1996-207312		19960806		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 10043680	ICM	B05D007-24
		ICS B60J005-00; B60R013-02; C09J005-00

AB A method independent of the environmental humidity and having a short aging time includes spraying a reaction-type hot-melt **adhesive** and an aqueous accelerator solution through sep. spray guns, mixing them in the air, coating on a trim part, and bonding a part to the trim part. Thus, a decorative sheet was bonded to a door trim with a Hibon XU 057-1 urethane **adhesive** and an NC-IM catalyst.

ST urethane hot melt **adhesive**; automobile door trim **adhesive**; decorative sheet automobile door trim

IT Crosslinking catalysts  
 (bonding of parts to automobile trim parts with urethane **adhesive** containing amine catalyst)

IT Polyurethanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (bonding of parts to automobile trim parts with urethane **adhesive** containing amine catalyst)

IT Decoration  
 (decorative materials; bonding of parts to automobile trim parts with **urethane adhesive containing amine catalyst**)  
 IT Adhesives  
 (hot-melt; bonding of parts to automobile trim parts with **urethane adhesive containing amine catalyst**)  
 IT Automobiles  
 (parts; bonding of parts to automobile trim parts with **urethane adhesive containing amine catalyst**)  
 IT Doors  
**Roofs**  
 (trims; bonding of parts to automobile trim parts with **urethane adhesive containing amine catalyst**)  
 IT 116680-33-2, NC-IM  
 RL: **CAT (Catalyst use); USES (Uses)**  
 (bonding of parts to automobile trim parts with **urethane adhesive containing amine catalyst**)  
 IT 204144-07-0, Hibon XU 057-1  
 RL: **TEM (Technical or engineered material use); USES (Uses)**  
 (bonding of parts to automobile trim parts with **urethane adhesive containing amine catalyst**)

L64 ANSWER 17 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1996:524380 HCAPLUS  
 DN 125:223465  
 ED Entered STN: 31 Aug 1996  
 TI Urethane-modified epoxy resin compositions for copper laminate boards  
 IN Uchida, Hiroshi  
 PA Ciba-Geigy Corp., USA  
 SO U.S., 12 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM C08L071-02  
 NCL 525403000  
 CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5545697	A	19960813	US 1994-196347	19940214
PRAI US 1994-196347			19940214	

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5545697	ICM C08L071-02	
	NCL 525403000	

AB An epoxy resin composition comprises (A) an epoxy resin containing an oxazolidone ring, (B) a halogen-containing epoxy resin, and (C) a curing agent having A/B ratio 5-100:95-0, hydrolyzable Cl content (A) and (B) ≤500 ppm, and the amount of α-glycol ≤100 mequiv/kg and is useful for electronic applications and as paints, **adhesives**, molding materials, composite materials, laminates and sealing materials. Thus, bisphenol A-epichlorohydrin copolymer (epoxy equivalent weight, EEW, 185), Millionate MT were heated in the presence of ring forming **catalyst** tetramethylammonium iodide at 175° for 3 h, tetrabromobisphenol A epoxy resin was added and the EEW was 306 g/equivalent. The above resin was cured with dicyandiamide in the presence of **catalyst** and solvent

as a varnish impregnated into glass cloth to prepare a prepreg. Eight prepgs were laminated with Cu foil and molded at 170° and 30 kg/cm<sup>3</sup> forming a laminate test board having good solder heat resistance and UL 94 flame rating V-0.

ST copper laminate epoxy prepg fireproof heatproof; epoxy resin oxazolidone contg prepg; tetrabromobisphenol resin prepg; storage stable epoxy resin prepg

IT Epoxy resins, preparation  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(oxazolidone ring-containing bromine-containing; prepg urethane-modified epoxy resin compns. for copper laminate boards)

IT Heat-resistant materials  
(fire-resistant, prepg urethane-modified epoxy resin compns. for copper laminate boards)

IT Fire-resistant materials  
(heat-resistant, prepg urethane-modified epoxy resin compns. for copper laminate boards)

IT 181764-52-3P 181764-54-5P 181764-56-7P 181764-58-9P  
**181764-59-0P**  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(copper-clad; prepg urethane-modified epoxy resin compns. for copper laminate boards)

IT 135421-71-5P 181764-47-6P 181764-48-7P 181764-49-8P  
**181764-50-1P**  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(precursor for crosslinking; prepg epoxy resin having excellent heat resistance, tenacity, storage stability and flame retardancy)

IT 37312-33-7P 181589-60-6P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(prepg urethane-modified epoxy resin compns. for copper laminate boards)

IT 181764-54-5P 181764-58-9P 181764-59-0P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(copper-clad; prepg urethane-modified epoxy resin compns. for copper laminate boards)

RN 181764-54-5 HCAPLUS

CN Guanidine, cyano-, polymer with (chloromethyl)oxirane, 4,4'-(1-methylethyldene)bis[2,6-dibromophenol], 4,4'-(1-methylethyldene)bis[phenol] and Millionate MTL (9CI) (CA INDEX NAME)

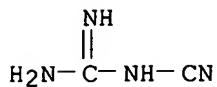
CM 1

CRN 61089-52-9  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

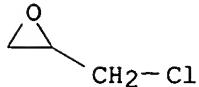
CM 2

CRN 461-58-5  
CMF C2 H4 N4



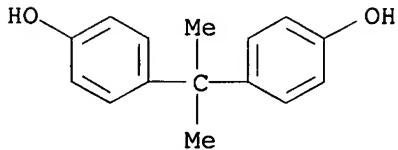
CM 3

CRN 106-89-8  
CMF C3 H5 Cl O



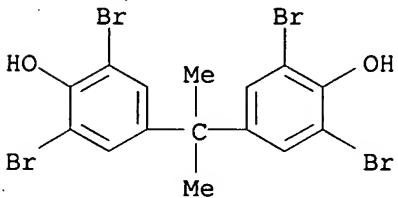
CM 4

CRN 80-05-7  
CMF C15 H16 O2



CM 5

CRN 79-94-7  
CMF C15 H12 Br4 O2



RN 181764-58-9 HCPLUS

CN Guanidine, cyano-, polymer with (chloromethyl)oxirane, Coronate T 80 and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

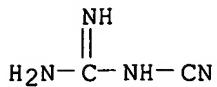
CM 1

CRN 91825-07-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

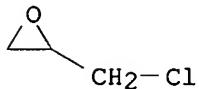
CM 2

CRN 461-58-5  
CMF C2 H4 N4



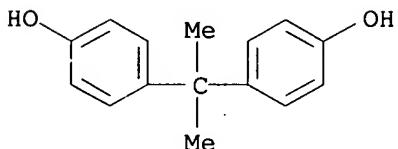
CM 3

CRN 106-89-8  
CMF C3 H5 Cl O



CM 4

CRN 80-05-7  
CMF C15 H16 O2



RN 181764-59-0 HCPLUS

CN Guanidine, cyano-, polymer with (chloromethyl)oxirane, Coronate T 80,  
4,4'-(1-methylethylidene)bis[phenol] and 4,4'-sulfonylbis[benzenamine]  
(9CI) (CA INDEX NAME)

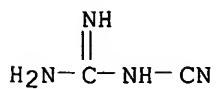
CM 1

CRN 91825-07-9  
CMF Unspecified  
CCI PMS, MAN

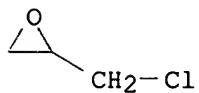
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

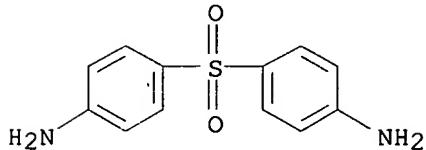
CRN 461-58-5  
CMF C2 H4 N4



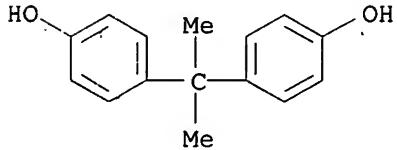
CM 3

CRN 106-89-8  
CMF C3 H5 Cl O

CM 4

CRN 80-08-0  
CMF C12 H12 N2 O2 S

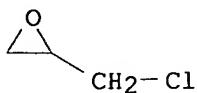
CM 5

CRN 80-05-7  
CMF C15 H16 O2

- IT 135421-71-5P 181764-48-7P 181764-50-1P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (precursor for crosslinking; prepreg epoxy resin having excellent heat resistance, tenacity, storage stability and flame retardancy)
- RN 135421-71-5 HCAPLUS  
 CN Phenol, 4,4'-(1-methylethylidene)bis[2,6-dibromo-, polymer with (chloromethyl)oxirane, 1,1'-methylenebis[4-isocyanatobenzene] and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

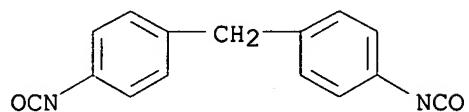
CM 1

CRN 106-89-8  
CMF C3 H5 Cl O



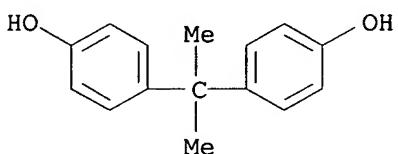
CM 2

CRN 101-68-8  
CMF C15 H10 N2 O2



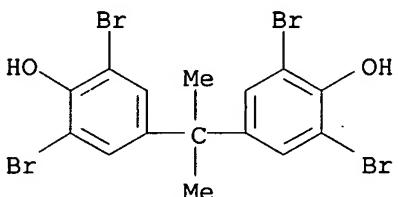
CM 3

CRN 80-05-7  
CMF C15 H16 O2



CM 4

CRN 79-94-7  
CMF C15 H12 Br4 O2



RN 181764-48-7 HCAPLUS  
CN Phenol, 4,4'-(1-methylethylidene)bis[2,6-dibromo-, polymer with (chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and Millionate MTL (9CI) (CA INDEX NAME)

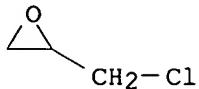
CM 1

CRN 61089-52-9  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

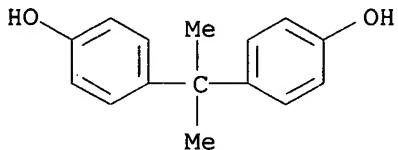
CM 2

CRN 106-89-8  
CMF C3 H5 Cl O



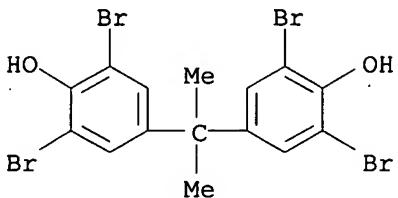
CM 3

CRN 80-05-7  
CMF C15 H16 O2



CM 4

CRN 79-94-7  
CMF C15 H12 Br4 O2



RN 181764-50-1 HCAPLUS

CN Phenol, 4,4'-(1-methylethyldene)bis-, polymer with (chloromethyl)oxirane and Coronate T 80 (9CI) (CA INDEX NAME)

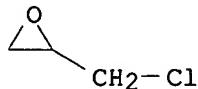
CM 1

CRN 91825-07-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

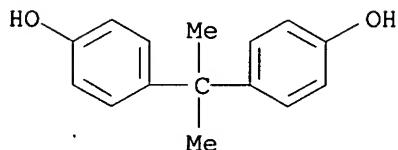
CM 2

CRN 106-89-8  
CMF C3 H5 Cl O



CM 3

CRN 80-05-7  
CMF C15 H16 O2



IT 37312-33-7P 181589-60-6P

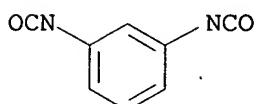
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(prepreg urethane-modified epoxy resin compns. for copper laminate boards)

RN 37312-33-7 HCAPLUS

CN Phenol, 4,4'-(1-methylethyldene)bis-, polymer with (chloromethyl)oxirane and 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

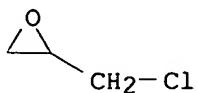
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



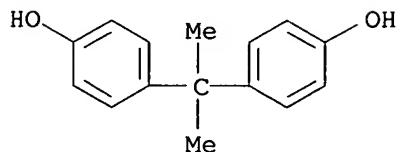
D1-Me

CM 2

CRN 106-89-8  
CMF C3 H5 Cl O



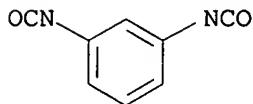
CM 3

CRN 80-05-7  
CMF C15 H16 O2

RN 181589-60-6 HCPLUS

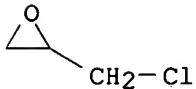
CN Phenol, 4,4'-(1-methylethylidene)bis[2,6-dibromo-, polymer with (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS

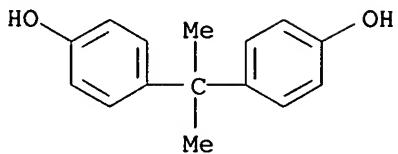
D1-Me

CM 2

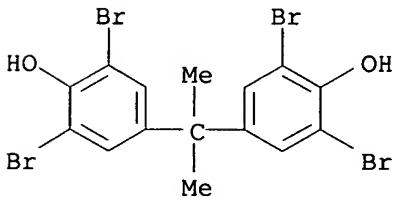
CRN 106-89-8  
CMF C3 H5 Cl O

CM 3

CRN 80-05-7  
CMF C15 H16 O2



CM 4

CRN 79-94-7  
CMF C15 H12 Br4 O2

L64 ANSWER 18 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1997:154813 HCPLUS  
 DN 126:158483  
 ED Entered STN: 10 Mar 1997  
 TI Foamable **adhesives** for waterproofing bonding of **roofing**  
 IN Iwata, Fujio; Yamaguchi, Takeshi  
 PA J C Composit Kk, Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM E04D001-36

ICS C09J175-04; E04D003-38; C08G018-10

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08333846	A2	19961217	JP 1995-140469	19950607
PRAI JP 1995-140469		19950607		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

JP 08333846	ICM	E04D001-36
		ICS C09J175-04; E04D003-38; C08G018-10

AB The title **adhesives**, useful for bonding **roofing tiles**, **slates**, etc., comprise **polyurethanes** (e.g., Meiwason CX-BH 5 Conc, Sanprene NCG 1000), blowing agents, and optionally, surfactants (e.g., aqueous ammonia), **catalysts** [e.g., bis(2,6-dimethylmorpholinoethyl) ether], and/or tackifiers (e.g., Hi-Metolose 90-SM-400, Nospole).

ST foamable **adhesive roofing** waterproofing bonding; **polyurethane foam adhesive** waterproofing **roofing**; surfactant **polyurethane foam adhesive**

roofing; catalyst polyurethane foam  
adhesive roofing; tackifier polyurethane foam  
adhesive roofing

IT Blowing agents  
    Catalysts  
    Roofing  
Surfactants  
Tackifiers  
    (foamable adhesives for waterproofing bonding of  
    roofing)

IT Polyurethanes, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)  
    (foamable adhesives; foamable adhesives for  
    waterproofing bonding of roofing)

IT Adhesives  
    (foamable; foamable adhesives for waterproofing bonding of  
    roofing)

IT 186844-98-4, Hi-Metolose 90SM400  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
    (tackifiers; foamable adhesives for waterproofing bonding of  
    roofing)

IT 103251-80-5  
RL: CAT (Catalyst use); USES (Uses)  
    (catalysts; foamable adhesives for waterproofing  
    bonding of roofing)

IT 7631-86-9, Aerosil 200, uses 9010-76-8, Expancel 551DE  
RL: MOA (Modifier or additive use); USES (Uses)  
    (foamable adhesives for waterproofing bonding of  
    roofing)

IT 159074-37-0, Meiwazol CX 3H5 Conc  
RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)  
    (foamable adhesives, Meiwazol CX-BH 5 Conc; foamable  
    adhesives for waterproofing bonding of roofing)

IT 186844-79-1, Sanprene NCG 1000  
RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)  
    (foamable adhesives, Sanprene NCG 1000; foamable  
    adhesives for waterproofing bonding of roofing)

IT 7664-41-7, Ammonia, uses  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
    (surfactants; foamable adhesives for waterproofing bonding of  
    roofing)

IT 186844-82-6, Nosuporu  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
    (tackifiers; foamable adhesives for waterproofing bonding of  
    roofing)

L64 ANSWER 19 OF 48 JICST-EPlus COPYRIGHT 2004 JST on STN  
AN 970162805 JICST-EPlus  
TI Research on the long-term durability of the lead material covered by  
painting.  
AU NISHIKAWA SEIICHI  
CS Univ. of Tokyo  
SO Nippon Kogyo Shinkokai Kenkyu Josei ni yoru Kenkyu Seika Hokoku, (1996)

vol. 1996, pp. 71-73. Journal Code: G0621B (Fig. 1, Tbl. 3, Ref. 1)

CY Japan  
 DT Journal; Article  
 LA Japanese  
 STA New

AB The weather resistance of various types of coating material was investigated for the plate of pure lead and of lead alloy ( Pb-0.2%Sb ). The test done by A Co. indicated that the acrylic **urethane** resin paint and acrylic silicone resin paint gave a good **adhesiveness**, while fluorocarbon resin paint gave a rather poor adherency. According to B Co., the **polyurethane** paint showed a poorer adherency at the initial stage, while acrylic silicone resin paint and acrylic resin paint showed a good adherency. The test results of C Co. showed that the adherency was not satisfactory for all the paints except **polyurethane** paint. In conclusion, the long term stability cannot be expected from synthetic resin paints though the occurrence of white rust can be suppressed to some extent.

CC YJ04030I; RB03030W (667.64/.661:669; 692.4)

CT lead; **roof** material; lead base alloy; antimony containing alloy; weather resistance; paint film; adhesion property; synthetic resin coatings; rust(corrosion); coating material(cover); acrylic resin coatings; **polyurethane** coatings

BT metallic element; element; carbon group element; material; nonferrous alloy; alloy; metallic material; containing alloy; resistance(endure); film(cover); membrane and film; property; coating material(paint); corrosion product; product material

L64 ANSWER 20 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN

AN 1995:835519 HCPLUS

DN 123:230695

ED Entered STN: 06 Oct 1995

TI Fastener-free **roofing** system with polymer **adhesives** for low-slope **roof** decks

IN Janoski, Ronald J.; Rudolph, Gregory J.; Gibson, Richard J.; Portfolio, Donald C.

PA USA

SO Can. Pat. Appl., 43 pp.

CODEN: CPXXEB

DT Patent

LA English

IC ICM C09J195-00

ICS C09J175-04; E04D011-02

CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 55, 58

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2101713	AA	19950131	CA 1993-2101713	19930730
PRAI	CA 1993-2101713		19930730		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CA 2101713	ICM	C09J195-00
	ICS	C09J175-04; E04D011-02
CA 2101713	ECLA	E04D011/02

AB A rigid panel is attached to the **roof** deck by applying a flowable polymer **adhesive** to the deck, and placing the panel for bonding by the hardened **adhesive**, without conventional use of nails and similar fasteners. The **adhesive** contains ≥10

weight% curable liquid prepolymer without solvents or a water-based emulsion, and is suitable for bonding of rigid insulation panels to a steel deck equipped with spaced ribs. The liquid prepolymer (especially an **isocyanate**) preferably contains dispersed bitumen, asphalt, coal tar with compatibility promoters of propylene glycol monostearate (I) type. The cure time of **adhesive** at 18-22° is <24 h (preferably <2 h), and the resulting panel is resistant to uplift loads of 90 lb/ft<sup>2</sup>. The typical prepolymer contains polyether triol 34, Bu benzyl phthalate 7, MDI 7 parts (based on **adhesive**), and Sn catalyst at nominally 1 ppm, and is mixed with preheated industrial asphalt 38, colloidal SiO<sub>2</sub> as thixotropic filler 1, CaCO<sub>3</sub> powder 4, and I 0.5 part.

ST roof deck bonding **adhesive** liq prepolymer; bitumen mixt prepolymer **adhesive** roof panel; steel roof deck bonding panel **adhesive**

IT Asphalt Bitumens

RL: POF (Polymer in formulation); USES (Uses)  
(**adhesives** containing dispersed; polymer **adhesives** for panel bonding to low-slope **roof decks**)

IT Urethane polymers, uses

RL: POF (Polymer in formulation); USES (Uses)  
(**adhesives** containing; polymer **adhesives** for panel bonding to low-slope **roof decks**)

IT Adhesives

(liquid prepolymer; polymer **adhesives** for panel bonding to low-slope **roof decks**)

IT Roofs

(low-slope; polymer **adhesives** for panel bonding to low-slope **roof decks**)

IT Tar

RL: POF (Polymer in formulation); USES (Uses)  
(coal, **adhesives** containing dispersed; polymer **adhesives** for panel bonding to low-slope **roof decks**)

IT Urethane polymers, uses

RL: POF (Polymer in formulation); USES (Uses)  
(polyether-, **adhesives** containing; polymer **adhesives** for panel bonding to low-slope **roof decks**)

IT 471-34-1, Calcium carbonate, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(**adhesives** containing powdered; polymer **adhesives** for panel bonding to low-slope **roof decks**)

IT 85-68-7, Butyl benzyl phthalate 101-68-8, Diphenyl methane diisocyanate 106-06-9, Triethylene glycol dipelargonate 111-60-4, Ethylene glycol monostearate 1323-39-3, Propylene glycol monostearate 7346-78-3, Triethylene glycol caprate caprylate 26403-62-3, Polypropylene glycol distearate

RL: MOA (Modifier or additive use); USES (Uses)  
(**adhesives** containing; polymer **adhesives** for panel bonding to low-slope **roof decks**)

IT 7631-86-9, Silica, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(colloidal, **adhesives** containing; polymer **adhesives** for panel bonding to low-slope **roof decks**)

IT 12597-69-2, Steel, uses

RL: DEV (Device component use); USES (Uses)  
(**roof decks**; polymer **adhesives** for panel bonding to low-slope **roof decks**)

L64 ANSWER 21 OF 48 COMPENDEX COPYRIGHT 2004 EEI on STN  
 AN 1995(25):2323 COMPENDEX  
 TI Avoiding field delamination with moisture-cure **urethane**.  
 AU Anon  
 SO Adhesives Age v 38 n 1 Jan 1995.p 24-25  
 CODEN: ADHAAO ISSN: 0001-821X  
 PY 1995  
 DT Journal  
 TC Application  
 LA English  
 AB To address field delamination of laminated walls, **roofs** and floors of its recreational vehicle, Coachmen Recreational Vehicle Co converted from solvent-based **adhesives** to a new environment-friendly, one-part, 100 percent solids, moisture-curing **urethane** laminating **adhesive** from Pierce and Stevens Corp (Buffalo, NY). As a result, Coachmen RV increased product quality by eliminating field delaminations, reduced the emission of harmful volatile organic compounds (VOCs) into the atmosphere and increased the life span of its RVs. After a gradual transition to the compliant moisture-curing **urethane adhesive** technology, the company expanded the usage to cover all the units manufactured daily.  
 CC 804.1 Organic Components; 421 Strength of Building Materials. Mechanical Properties; 415 Metals, Plastics, Wood and Other Structural Materials; 662 Automobiles and Smaller Vehicles; 801.4 Physical Chemistry; 454.2 Environmental Impact and Protection  
 CT \***Adhesives**; Laminates; Organic compounds; Ground vehicles; Volatile organic compounds; Environmental protection; Service life; Sandwich structures; Quality control; Delamination  
 ST **Urethane adhesives**; Recreational vehicles; Moisture curing **adhesives**  
 ET Co; Cs\*O\*V; Cs sy 3; sy 3; O sy 3; V sy 3; VOCs; V cp; cp; O cp; Cs cp

L64 ANSWER 22 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1995:207530 HCAPLUS  
 DN 122:33209  
 ED Entered STN: 23 Nov 1994  
 TI Substantially solventless microdispersions of asphalt in liquid prepolymers and compatibilizers for forming them and their uses  
 IN Janoski, Ronald J.  
 PA Tremco, Inc., USA  
 SO U.S., 11 pp. Cont. of U.S. Ser. No. 497,048, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM C08L095-00  
 NCL 524059000  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 39, 42  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5319008	A	19940607	US 1992-858453	19920327
	AU 9172748	A1	19911003	AU 1991-72748	19910308
	AU 644142	B2	19931202		
PRAI	US 1990-497048		19900321		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5319008	ICM	C08L095-00

NCL 524059000

- OS MARPAT 122:33209
- AB The title dispersion can be cured to an elastomer having excellent adhesion to surfaces exposed outdoor, and is useful for coatings, adhesives, caulk, etc. The stability of the dispersion is derived from asphalt being microdispersed (at 0.5-100 µm size) in a continuous phase of the liquid prepolymer. The asphalt is treated to react all functional groups it may have because they may react with a functional group of the liquid prepolymer. The prepolymer is a polyurethane, a terpolymer of ethylene-propylene-diene, or a silicone. The microdispersion is stabilized by a compatibilizer chosen from an ester of a C2-12 branched or straight chain polyol; a mono- or diester of a polyether polyol; an ester of a polyester polyol and a C9-24 fatty acid; an ester of a polyether diol such as a poly(C5-6)alkadiene diol and, a polydimethylsiloxane diol; or an ester of a polyester polyol having a repeating unit derived from acrylic acid and a polyol selected from the group consisting of a C2-12 alkylene diol, or triol; and a polyoxy(C2-4)alkylene diol.
- ST solventless asphalt polymer microdispersion curability elastomer; adhesive solventless asphalt polymer microdispersion elastomer; sealing solventless asphalt polymer microdispersion elastomer; caulking solventless asphalt polymer microdispersion elastomer; coating solventless asphalt polymer microdispersion elastomer
- IT Rubber, butyl, uses  
Rubber, silicone, uses  
Rubber, urethane, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(binders; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Asphalt  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(blocked; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Esters, uses  
RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)  
(compatibilizer; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Adhesives  
(roofing; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming)
- IT Caulking compositions  
(solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for)
- IT Rubber, synthetic  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(EPDM, binders; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Rubber, urethane, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acrylonitrile-butadiene-isophorone diisocyanate, binder; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Adhesives  
(hot-melt, solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)

- IT Polyoxyalkylenes, uses  
RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)  
(hydroxy-terminated, esters with polycarboxylic acids, compatibilizers; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Siloxanes and Silicones, uses  
RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)  
(hydroxy-terminated, reaction products, of 1352N2E with stearic acid; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Rubber, nitrile, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(hydroxy-terminated, reaction products, with IPDI, of Hycar 1300X34; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Rubber, synthetic  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(isobutylene, binders; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Carboxylic acids, uses  
RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)  
(poly-, esters with hydroxy-terminated polyoxyalkylenes, compatibilizers; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Rubber, urethane, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(polyester-, binders; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Rubber, urethane, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(polyoxyalkylene-, binders; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT Coating materials  
Sealing compositions  
(weather-resistant, solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for)
- IT 57-11-4D, Octadecanoic acid, reaction products with silicone diol  
RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)  
(blocking agents; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT 108-31-6D, 2,5-Furandione, asphalt blocked by 4083-64-1,  
p-Toluenesulfonyl isocyanate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(blocking agents; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)
- IT 57-11-4D, Octadecanoic acid, esters 57-55-6D, 1,2-Propanediol, esters 112-05-0D, Pelargonic acid, esters 112-80-1D, Oleic acid, esters 126-30-7D, esters 143-07-7D, Lauric acid, esters 1323-39-3, Propylene glycol monostearate 15337-64-1, 1,4-Butanediol monostearate 159806-32-3D, esters 159940-17-7 159940-32-6  
RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES

(Uses)

(compatibilizer; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)

IT 9010-85-9

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(rubber, binders; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)

IT 9003-18-3

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(rubber, hydroxy-terminated, reaction products, with IPDI, of Hycar 1300X34; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)

IT 101-68-8D, polymers with polyether polyols 4098-71-9D, polymers with hydroxy-terminated nitrile rubber 9003-18-3D, Acrylonitrile-butadiene copolymer, hydroxy-terminated, polymers with IPDI 9003-27-4 9016-00-6, Polydimethylsiloxane 25038-59-9D, PET polyester, polyols, polymers with polyether-polyols and MDI 25322-69-4D, Polyoxypropylene glycol, triol derivative, polymers with polyisocyanates 31900-57-9, Dimethylsilanediol polymer 56815-45-3, Adipic acid-1,4-butanediol-MDI-neopentyl glycol copolymer 159806-34-5

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(rubber; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)

IT 56815-45-3, Adipic acid-1,4-butanediol-MDI-neopentyl glycol copolymer 159806-34-5

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(rubber; solventless microdispersion of asphalt in liquid prepolymers and compatibilizers for forming and use)

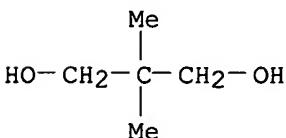
RN 56815-45-3 HCAPLUS

CN Hexanedioic acid, polymer with 1,4-butanediol, 2,2-dimethyl-1,3-propanediol and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 126-30-7

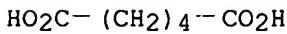
CMF C5 H12 O2



CM 2

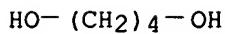
CRN 124-04-9

CMF C6 H10 O4



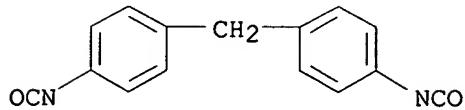
CM 3

CRN 110-63-4  
CMF C4 H10 O2



CM 4

CRN 101-68-8  
CMF C15 H10 N2 O2

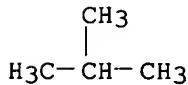


RN 159806-34-5 HCAPLUS

CN Hexanedioic acid, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2-methyl-1,? propanediol (9CI) (CA INDEX NAME)

CM 1

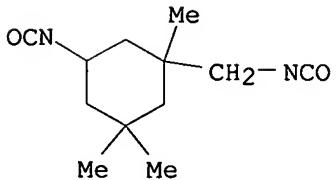
CRN 159806-32-3  
CMF C4 H10 O2  
CCI IDS



2 ( D1—OH )

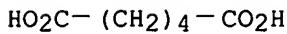
CM 2

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 3

CRN 124-04-9  
CMF C6 H10 O4



L64 ANSWER 23 OF 48 JICST-EPlus COPYRIGHT 2004 JST on STN  
AN 950132202 JICST-EPlus  
TI A Basic Study on Characteristics of **Urethane** Material for Grout  
Forepoling Applied for Tunnelling.  
AU HIGO MITSUAKI  
MAKI HIROHISA  
FURUKAWA KOHEI; NAKAGAWA KOJI  
CS Hazama Corp.  
Dai-ichi Kogyo Seiyaku Co., Ltd.  
Yamaguchi Univ., Fac. of Eng.  
SO Doboku Gakkai Ronbunshu (Proceedings of JSCE (Japan Society of Civil  
Engineers)), (1994) no. 504, pp. 117-126. Journal Code: F0028A (Fig. 17,  
Tbl. 4, Ref. 16)  
ISSN: 0289-7806  
CY Japan  
DT Journal; Article  
LA Japanese  
STA New  
AB Considering actual applicability and effectiveness at the site, two  
different **urethane** grout materials currently used forepoling  
were tested in a laboratory. And following test results were obtained: 1)  
**Urethan** materials are effervesced after grouting, and its  
cohesiveness and rising time which influence on workability are affected  
by temperature. 2) Concerning reinforcement of ground, quick reinforcing  
effect is achieved, and not only compressive strength but also tensile  
strength and **adhésive** tensile strength of material after  
grouting are found enough. (author abst.)  
CC RC05031E; RA060300 (624.191; 691.1)  
CT grouting; grouting material; NATM; carbamate(ester); mountain tunnel;  
country rock(mining); viscosity; temperature dependence; **adhesive**  
strength; reaction rate; **roof bolt**  
BT construction method; filling material; material; tunneling method; ester;  
tunnel; ground; mechanical property; property; dependence; strength;  
velocity; rockbolt; support material  
  
L64 ANSWER 24 OF 48 JICST-EPlus COPYRIGHT 2004 JST on STN  
AN 940710926 JICST-EPlus  
TI Waterproofing and function improvement of verandas terraces, and open  
corridors.Waterproofing of balconies and tile finish.  
AU NARA TOSHIO  
CS Jikkusu  
SO Bosui Janaru (Bosui Journal), (1994) vol. 25, no. 8, pp. 57-59. Journal  
Code: S0412A (Fig. 13)  
ISSN: 0289-3894  
CY Japan  
DT Journal; Commentary  
LA Japanese

STA New  
AB With upgrading of external wall finish, requirements of upgraded balcony finish are increasing. In a **roof** balcony case reported in this paper, **urethane** waterproofing material is used for adhering tiles directly on **urethane** water-proofing layer as tile **adhesive** so as to comply with requirements of upgrading. Construction cases are introduced.  
CC RB01032Q; RA07110I (699.82; 693/694)  
CT balcony; waterproof layer; **polyurethane**; tile work  
BT layer; polymer; construction work; construction(work)

L64 ANSWER 25 OF 48 COMPENDEX COPYRIGHT 2004 EEI on STN  
AN 1994(23):1867 COMPENDEX  
TI Required properties of injection material for strata consolidation.  
Anforderungen an Injektionsmittel fuer die Gebirgsverfestigung.  
AU Gemmel, Dietrich-Wilhelm (E-Plus Mobilfunk GmbH)  
SO Glueckauf-Forschungsshefte v 54 n 6 Dec 1993.p 271-277  
CODEN: GKFRAA ISSN: 0017-1387  
PY 1993  
DT Journal  
TC Application; Experimental  
LA German  
AB Cement suspensions and different artificial resins are used to consolidate cut strata beds in gateroad **roofs**. Three properties of the injection material are relevant to the success of the injection measures: **adhesiveness**, deformability and penetrative capacity. Artificial resins possess adequate **adhesiveness** after a few hours setting time, while cement suspensions only achieve appreciable **adhesiveness** after 24 h at the earliest. The deformability of silicate resins and of hardened cements up to the break of the adhesion join is extremely slight, whereas **polyurethanes** have almost ideal deformation properties. Penetration of artificial resins is better than that of injection cements. The relatively low viscosity and foaming of the **polyurethanes** means that they have very high penetrating powers as compared with other injection materials. Comparative underground trials in several gateroads showed that injection materials based on **polyurethane**, silicate resin and fine cement suspension will improve the condition of the strata edge, that injection success is greater with **polyurethanes** than with silicate resins, and that these are more likely to reduce **roof** falls than with fine cement suspensions. (Author abstract) 12 Refs.  
CC 502.1 Mine and Quarry Operations; 804 Chemical Products Generally; 817.2 Plastics Applications; 931.1 Mechanics  
CT \*Mines; Cements; Suspensions (fluids); Plastics applications; Viscosity; **Polyurethanes**; Silicate minerals; Polymers  
ST. Injection materials; Strata consolidation; Cement suspensions; Artificial resins; Silicate resins

L64 ANSWER 26 OF 48 RAPRA COPYRIGHT 2004 RAPRA on STN  
AN R:501681 RAPRA FS Rapra Abstracts; Adhesives Abstracts  
TI ROOFING ADHESIVE.  
SO Adhesives Age 36, No.13, Dec.1993, p.8  
ISSN: 0001-821X  
CODEN: ADHAAO  
PY 1993  
DT Journal  
LA English  
AB A **polyurethane-based moisture cured** roof insulation **adhesive** has been introduced by

InstaFoam Products Inc. The article supplies brief details of the products, named Insta-Stik.

CC 6A1; 6R43; 6L3; 43C6; 8.10.1  
 SC \*QB; QP; QL; KT; SK  
 \*ADANJ; ADALF  
 CT ADHESIVE; BOARD; COMPANY; COMPOSITE; INSULATION; MOISTURE CURING; PLASTIC; POLYISOCYANURATE; POLYURETHANE; PRODUCT ANNOUNCEMENT; REINFORCED PLASTIC; ROOFING; SHORT ITEM; THERMOSET  
 NPT CALCIUM SULPHATE; GYPSUM; PERLITE; CALCIUM SULFATE  
 SHR ADHESIVES, roofing insulation, PU; INSULATION, roofs, adhesives; URETHANE POLYMERS, roof insulation adhesives; ROOFS, insulation adhesives  
 SHA URETHANE POLYMERS, roofing insulation; BUILDING APPLICATIONS, roofing insulation  
 CO INSTAFOAM PRODUCTS INC.  
 GT USA  
 TN INSTA-STIK

L64 ANSWER 27 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1992:237018 HCAPLUS  
 DN 116:237018  
 ED Entered STN: 13 Jun 1992  
 TI Formation of fiber-reinforced thermosetting resin layers on concrete or slate, and the resulting composite structures  
 IN Tsuji, Shuya  
 PA Dainippon Ink and Chemicals, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM B32B005-00  
 ICS B32B027-40; E04D007-00  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 58  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03261547	A2	19911121	JP 1990-78929	19900329
JP 2580829	B2	19970212		
PRAI JP 1990-16050		19900129		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 03261547	ICM	B32B005-00
		ICS B32B027-40; E04D007-00

AB The composites, with good waterproofing, salt shielding, and CO<sub>2</sub> barrier properties, comprise (a) a fiber-reinforced thermosetting resin layer, (b) an adhesive layer, (c) a plastic layer with elongation (JIS K 6301) ≥30%, and (d) a concrete or slate substrate. Thus, a concrete substrate was coated with polyurethane to form a 2-mm waterproofing layer, covered with a polyurethane adhesive at 150 g/m<sup>2</sup> (solids), cured, and covered with Polylite FR 200 and a glass fiber mat to form a composite having good peel strength.  
 ST polyester polyurethane layer concrete protection; peel strength concrete polyester polyurethane  
 IT Rubber, nitrile, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)

(adhesives, DP Bond E, for thermosetting resin layers on concrete or slate)

IT Epoxy resins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, for thermosetting resin layers on concrete or slate)

IT Plastics, laminated  
RL: USES (Uses)  
(fiber-reinforced thermosetting resin and plastic layers with concrete or slate)

IT Concrete  
(formation of fiber-reinforced thermosetting resin and plastic layers on)

IT Adhesives  
(polyurethane-based, for thermosetting resin layers on concrete or slate)

IT Urethane polymers, uses  
RL: USES (Uses)  
(waterproofing layers, on concrete or slate, with fiber-reinforced thermoset surface layers)

IT Rubber, butadiene, uses  
RL: USES (Uses)  
(of 1,2-configuration, hydroxy-terminated, polymers, with PAPI, adhesives, for thermosetting resin layers on concrete or slate)

IT Roofing  
(slate, formation of fiber-reinforced thermosetting resin and plastic layers on)

IT Polyesters, uses  
RL: USES (Uses)  
(unsatd., fiber-reinforced, as surface layer on plastic-laminated concrete or slate)

IT 9016-87-9D, polymer with Nisso PB-G 1000 81856-71-5  
**141189-36-8** 141581-35-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, for thermosetting resin layers on concrete or slate)

IT 141255-99-4, Polylite FR 200  
RL: USES (Uses)  
(fiber-reinforced, as surface layer on plastic-laminated concrete or slate)

IT 9003-18-3  
RL: USES (Uses)  
(rubber, adhesives, DP Bond E, for thermosetting resin layers on concrete or slate)

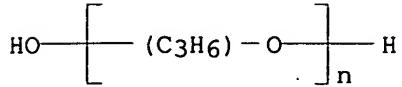
IT 9003-17-2  
RL: USES (Uses)  
(rubber, of 1,2-configuration, hydroxy-terminated, polymers, with PAPI, adhesives, for thermosetting resin layers on concrete or slate)

IT 81856-71-5 141189-36-8  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, for thermosetting resin layers on concrete or slate)

RN 81856-71-5 HCAPLUS

CN Isocyanic acid, polymethylenepolyphenylene ester, polymer with 1,3-butanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CRN 25322-69-4  
CMF (C<sub>3</sub> H<sub>6</sub> O)<sub>n</sub> H<sub>2</sub> O  
CCI IDS, PMS



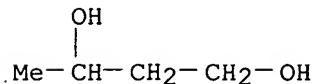
CM 2

CRN 9016-87-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

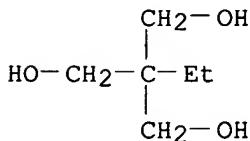
CM 3

CRN 107-88-0  
CMF C<sub>4</sub> H<sub>10</sub> O<sub>2</sub>



CM 4

CRN 77-99-6  
CMF C<sub>6</sub> H<sub>14</sub> O<sub>3</sub>



RN 141189-36-8 HCAPLUS  
CN 1,3-Butanediol, polymer with 1,3-diisocyanatomethylbenzene,  
2-ethyl-2-(hydroxymethyl)-1,3-propanediol and Hyprox DP 1000 (9CI) (CA  
INDEX NAME)

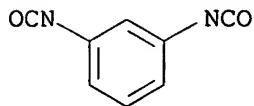
CM 1

CRN 123516-34-7  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

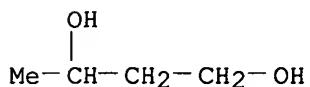
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

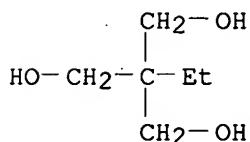
CM 3

CRN 107-88-0  
CMF C4 H10 O2



CM 4

CRN 77-99-6  
CMF C6 H14 O3



L64 ANSWER 28 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1991:609714 HCPLUS  
DN 115:209714  
ED Entered STN: 15 Nov 1991  
TI Waterproofing ethylene-propylene terpolymer sheets and their repair  
IN Takasugi, Sumio; Yanagisawa, Seiichi; Kawanabe, Minoru; Wanibuchi,  
Akishige  
PA Yokohama Rubber Co., Ltd., Japan; Kyoritsu Chemical Industry Co., Ltd.  
SO Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C09J163-00  
ICS C09J163-00; E04D005-00; E04D011-00; E04G023-02  
CC 38-3 (Plastics Fabrication and Uses)  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03045681	A2	19910227	JP 1989-181513	19890713
PRAI JP 1989-181513		19890713		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
JP 03045681	ICM	C09J163-00	
	ICS	C09J163-00; E04D005-00; E04D011-00; E04G023-02	
AB	Repair of title sheets (useful as moisture-barrier and waterproofing layers under <b>roof</b> , etc.) is done by bonding them with a PVC or ethylene-propylene terpolymer (I) sheet using an <b>adhesive</b> containing 100 parts <b>urethane</b> -modified epoxy resin, 20-150 parts tackifier, and a curing agent. Thus, a I sheet and a PVC sheet were bonded together by means of an adhesive containing a <b>urethane</b> -modified epoxy resin (the <b>urethane</b> was prepared from glycidol, polytetramethylene glycol, and TDI) 100, Hycar AIBN 1300 + 16 (amino-terminated acrylonitrile-butadiene rubber) 100, Adeka Hardener EH 270 20, and chlorinated butyl rubber 70 parts to give a laminate with peel strength 2.4 (normal condition), 2.1 (under water), and 2.4 kg/25 mm (under heating).		
ST	ethylene-propylene copolymer waterproofing sheet; <b>urethane</b> modified epoxy resin <b>adhesive</b> ; chlorinated butyl rubber tackifier		
IT	Tackifiers (for <b>urethane</b> -modified epoxy resin <b>adhesives</b> for repairing ethylene-propylene terpolymer <b>roof</b> -waterproofing sheets)		
IT	<b>Adhesives</b> ( <b>urethane</b> -modified epoxy resins, for repairing ethylene-propylene terpolymer <b>roof</b> -waterproofing sheets)		
IT	Rubber, butyl, compounds RL: USES (Uses) (chlorinated, tackifiers, for repairing ethylene-propylene copolymer <b>roof</b> -waterproofing sheets)		
IT	<b>Urethane</b> polymers, uses and miscellaneous RL: TEM (Technical or engineered material use); USES (Uses) (epoxy, <b>adhesives</b> , for repairing ethylene-propylene copolymer <b>roof</b> -waterproofing sheets)		
IT	Rubber, butadiene-styrene, uses and miscellaneous RL: USES (Uses) (hydrogenated, block, triblock, tackifiers, Kraton G 1652, for repairing ethylene-propylene copolymer <b>roof</b> -waterproofing sheets)		
IT	Rubber, nitrile, uses and miscellaneous RL: USES (Uses) (piperazine group-terminated, tackifiers, Hycar ATBN 1300X16, for repairing ethylene-propylene copolymer <b>roof</b> -waterproofing sheets)		
IT	Epoxy resins, uses and miscellaneous RL: TEM (Technical or engineered material use); USES (Uses) ( <b>polyurethane</b> -, <b>adhesives</b> , for repairing ethylene-propylene copolymer <b>roof</b> -waterproofing sheets)		
IT	9069-50-5D, reaction products with epoxy resin 135245-43-1D, reaction products with epoxy resin RL: TEM (Technical or engineered material use); USES (Uses) ( <b>adhesives</b> , for repairing ethylene-propylene copolymer <b>roof</b> -waterproofing sheets)		
IT	90451-84-6, Adeka EH 270		

RL: CAT (Catalyst use); USES (Uses)  
(rosslinking catalysts, for adhesives for repairing  
ethylene-propylene copolymer roof-waterproofing sheets)

IT 9010-85-9  
RL: USES (Uses)  
(rubber, chlorinated, tackifiers, for repairing ethylene-propylene  
copolymer roof-waterproofing sheets)

IT 106107-54-4 694491-73-1  
RL: USES (Uses)  
(rubber, hydrogenated, block, triblock, tackifiers, Kraton G 1652, for  
repairing ethylene-propylene copolymer roof-waterproofing  
sheets)

IT 9003-18-3  
RL: USES (Uses)  
(rubber, piperazine group-terminated, tackifiers, Hycar ATBN 1300X16,  
for repairing ethylene-propylene copolymer roof-waterproofing  
sheets)

IT 9002-86-2, PVC  
RL: USES (Uses)  
(sheets for repairing roof-waterproofing sheets,  
adhesives for)

IT 74-85-1D, Ethene, terpolymers with propylene 115-07-1D, 1-Propene,  
terpolymers with ethylene  
RL: USES (Uses)  
(sheets for waterproofing roof, repair of, sheets and  
adhesives for)

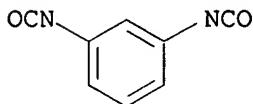
IT 9069-50-5D, reaction products with epoxy resin  
135245-43-1D, reaction products with epoxy resin  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, for repairing ethylene-propylene copolymer  
roof-waterproofing sheets)

RN 9069-50-5 HCAPLUS

CN Poly(oxy-1,4-butanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy-, polymer with  
1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

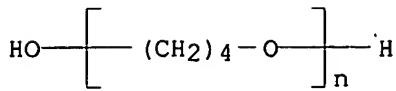
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

CM 2

CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS



RN 135245-43-1 HCPLUS

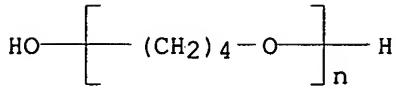
CN Oxiranemethanol, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 25190-06-1

CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O

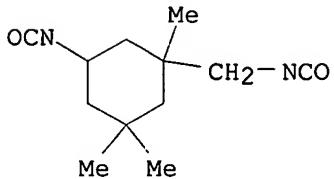
CCI PMS



CM 2

CRN 4098-71-9

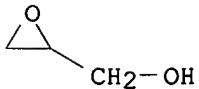
CMF C<sub>12</sub> H<sub>18</sub> N<sub>2</sub> O<sub>2</sub>



CM 3

CRN 556-52-5

CMF C<sub>3</sub> H<sub>6</sub> O<sub>2</sub>



L64 ANSWER 29 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN

AN 1992:108093 HCPLUS

DN 116:108093

ED Entered STN: 20 Mar 1992

TI Preparation and uses of solvent-free organic compositions and elastomers

IN Janoski, Ronald J.

PA Tremco, Inc., USA

SO Brit. UK Pat. Appl., 35 pp.

CODEN: BAXXDU

DT Patent

LA English

IC ICM C08L095-00

ICS C08K005-01; C08K005-04; C08K005-10; C09D175-04; C09D195-00;  
C09J175-04; C09J195-00; C08L095-00; C08L075-04

CC 39-4 (Synthetic Elastomers and Natural Rubber)

Section cross-reference(s): 58

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2242435	A1	19911002	GB 1991-5884	19910320
	AU 9172748	A1	19911003	AU 1991-72748	19910308
	AU 644142	B2	19931202		
PRAI	US 1990-497048		19900321		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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GB 2242435	ICM C08L095-00	
	ICS C08K005-01; C08K005-04; C08K005-10; C09D175-04;	
	C09D195-00; C09J175-04; C09J195-00; C08L095-00;	
	C08L075-04	

AB Solvent-free compns. useful as coatings, **adhesives**, and sealants are prepared by mixing asphalt, bitumens, coal tar, or nonvolatile petroleum with liquid prepolymers in the presence of compatibilizers containing surfactants. Thus, a prepolymer from a polyester polyol, Bu benzyl phthalate (I) and MDI was mixed with molten asphalt, maleic anhydride, Sn **catalysts**, bentonite, and propylene glycol monostearate (compatibilizer) to give a cured elastomer with good peel and tensile adhesion and lap shear strength, useful in **roofing adhesives**.

ST asphalt blend prepolymer; hydroxypropyl stearate compatibilizer; polyurethane prepolymer blend asphalt; **adhesive roofing** asphalt blend; compatibilizer asphalt blend prepolymer

IT Roofing  
(**adhesives** for, solvent-free asphalt-**urethane** prepolymer blends as)

IT Sealing compositions  
Water-resistant materials  
(bitumen-prepolymer blends, formulation of)

IT Rubber, synthetic  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(blends with asphalt, solvent-free, preparation and uses of)

IT Asphalt  
Bitumens  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(blends with liquid prepolymers, solvent-free, preparation and uses of)

IT Tar  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(coal, blends with liquid prepolymers, solvent-free, preparation and uses of)

IT Rubber, **urethane**, uses  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polyester-, blends with asphalt, solvent-free, preparation and uses of)

IT **Adhesives**  
(solventless, bitumen-prepolymer blends, formulation of)

IT 106-06-9, Triethyleneglycol dipelargonate 111-60-4, Ethyleneglycol monostearate 1323-39-3, Propylene glycol monostearate 7346-78-3

26403-62-3

RL: USES (Uses)

(compatibilizers, for asphalt-prepolymer blends)

IT 101-68-8DP, Diphenylmethane diisocyanate, polymers with polyether polyol  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(oligomeric, blends with asphalt, preparation and uses of)

L64 ANSWER 30 OF 48 COMPENDEX COPYRIGHT 2004 EEI on STN

AN 1993(2):24109 COMPENDEX DN 930225419

TI Development of an all-purpose impermeably-faced **roof** insulation.

AU Soukup, T.G. (Jim Walter Research Corp, St.Petersburg, FL, USA); Laughlin, W.E.

MT Polyurethanes World Congress 1991.

MO SPI; European Isocyanate Producers Assoc

ML Nice, Fr

MD 24 Sep 1991-26 Sep 1991

SO Polyurethanes World Congr 91. Publ by Technomic Publ Co Inc, Lancaster, PA, USA.p 69-74

PY 1991

MN 17401

DT Conference Article

TC Experimental; Application

LA English

AB Facings used in the manufacture of rigid **polyurethane** and polyisocyanurate foam insulations serve a vital role in the overall suitability of a product to meet the demands of the intended application. Current **roof** construction methods present broadly diverse application environments, from mechanically or **adhesively** attached single-ply membranes to hot applied bituminous built-up systems (BUR), which generally preclude the use of an insulation facing comprising ideal properties yet retaining universal suitability. Such an 'all-purpose' facing material would be desirable. Most dual-purpose **roof** insulations for use in either single-ply or hot-mop BUR applications incorporate very tough, fibrous glass mats or cellulosic/glass fiber felts. These facers are permeable to air and moisture to allow their use in hot-mop systems but this permeability results in aged kappa -factors that are similar to unfaced foams. Wall sheathings and insulations specifically designed for single-ply use most often utilize facings of plain aluminum foil or combinations of aluminum foil and paper, glass mats or synthetic films. Such facings cannot be hot-mopped nor are they as tough as the fibrous **roof** insulation facers. If properly designed, however, these facers are impermeable, preventing the infusion of air and moisture into the closed cell core foam and promoting kappa -factor retention as demonstrated by the foil faced products of the Celotex Corp. with stabilized kappa -factor values of 0.021 W/m degree C (0.142 Btu in/hr ft<sup>2</sup> degree F). Technology has now been developed by the Jim Walter Research Corp. for fibrous sheet-polymer composite facers which combine the toughness, durability and hot-mop characteristics of fibrous **roof** insulation facers with the air/moisture impermeability of foil facers. A series of heavy cellulosic papers varying in construction from virgin pulps to modified blends of secondary fibers were coated with polyvinylidene chloride (PVDC) latex emulsions. Rigid polyisocyanurate foam board was produced, laminated with the prototype facings in continuous restrained-rise and free-rise commercial processes. Candidates were screened in both laboratory and field applied single-ply and BUR applications under standard construction conditions. To study the effectiveness of the PVDC barrier coating, a screening method was developed to correlate kappa -factor retention with the oxygen gas transmission rate (O<sub>2</sub>GTR) of the facing as determined by ASTM

D3985-81. This study showed that an O2GTR less than 0.3 cc/100 in<sup>2</sup> 24 hrs for a well adhered foam facer ensured that the product met the desired stabilized kappa -factor of 0.021. Insulation value testing by ASTM C518 has verified this correlation and identified the optimum facer composition. Two commercial roof insulation products, TRI-Star and STABLE-R are currently available from the Celotex Corp. with a stabilized kappa -factor of 0.021 W/m degree employing this technology. (Author abstract) 4 Refs.

CC 413 Insulating Materials; 818 Rubber & Elastomers; 813 Coatings & Finishes; 811 Cellulose, Paper & Wood Products  
CT \*THERMAL INSULATING MATERIALS; RIGID FOAMED PLASTICS; PROTECTIVE COATINGS; ROOFS; COMPOSITE MATERIALS; FOAMED RUBBER  
ST ROOF INSULATION; IMPERMEABLE FACING; OXYGEN GAS TRANSMISSION RATE; BARRIER COATING; BITUMINOUS BUILTUP SYSTEMS  
ET C; F; O; D

L64 ANSWER 31 OF 48 JICST-EPlus COPYRIGHT 2004 JST on STN  
AN 910564581 JICST-EPlus  
TI "P&A metal waterproofing construction method".  
SO Sutenresu (Stainless), (1991) vol. 35, no. 6, pp. 3-7. Journal Code: F0534A (Fig. 12, Tbl. 4).  
ISSN: 0285-502X  
CY Japan  
DT Journal; Commentary  
LA Japanese  
STA New  
CC RB01032Q (699.82)  
CT waterproof structure; stainless steel; steel plate; joint(part); sealant; polyurethane; pressure sensitive adhesive; tightening; roof(building); waterproofing work  
BT structure; high alloy steel; alloy steel; steel; iron and steel; metallic material; anti-corrosion metal; metal plate; plate classified by material; plate(material); steel product; part; filling material; material; polymer; adhesive; operation(processing); construction work; construction(work)

L64 ANSWER 32 OF 48 RAPRA COPYRIGHT 2004 RAPRA on STN  
AN R:445819 RAPRA FS Rapra Abstracts; Adhesives Abstracts  
TI TMXDI (META) ALIPHATIC ISOCYANATE.  
CS AMERICAN CYANAMID CO., URETHANE CHEM.DIV.  
SO Wayne, NJ, 1990, pp.11. 12ins. 24/6/91. 33L5-43C6  
PY 1990  
DT Company Publication  
LA English  
AB Properties are discussed for TMXDI (META) aliphatic isocyanate. Polyurethanes based on TMXDI (META) are characterised by weathering resistance, durability, and hydrolytic resistance. In addition, prepolymers have proven to be significantly less viscous than those based on conventional aliphatic isocyanates, and have resulted in cured systems with improved elongation. Applications are also described and include aqueous PU dispersions, roofing and flooring UV-curing systems, solid castable elastomers, potting and encapsulating systems, and adhesives.  
CC 33L5; 43C6  
SC \*IA; KT; QB; UE; OB; QP; QF; SD  
\*ADANJ  
CT ADHESIVE; ALIPHATIC; APPLICATION; AQUEOUS DISPERSION; BUILDING APPLICATION; BUILDING APPLICATIONS; CAST; CASTABLE; CATALYSIS; CATALYST; CHEMICAL PROPERTIES; COMPANIES; COMPANY; DATA;

ELONGATION; ENCAPSULATION; FLOOR; FLOORING; FORMULATION; GRAPH;  
 HYDROLYSIS; HYDROLYTIC STABILITY; PHYSICAL PROPERTIES; PLASTIC;  
 POLYURETHANE; POTTING COMPOUND; PREPOLYMER; PRODUCT ANNOUNCEMENT;  
 PROPERTIES; PU; REACTION INJECTION MOULDING; REACTION MOULD; REACTIVITY;  
 ROOF; ROOFING; STABILITY; TABLES; TECHNICAL; THERMOSET;  
 TOXICITY; TOXICOLOGY; UV CURING; VISCOSITY; WEATHERING; WEATHERING  
 RESISTANCE; REACTION INJECTION MOLDING; REACTION MOLD

NPT ISOCYANATE; TETRAMETHYLXYLENE DIISOCYANATE  
 SHR ISOCYANATES, aliphatic,PU; URETHANE POLYMERS,  
 prepolymers, *isocyanates*  
 SHA ISOCYANATES, aliphatic,PU; URETHANE POLYMERS,  
 prepolymers, *isocyanates*  
 GT USA  
 TN TMXDI

L64 ANSWER 33 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1991:83472 HCPLUS

DN 114:83472

ED Entered STN: 09 Mar 1991

TI **Adhesive** compositions for bonding ethylene-propylene terpolymers

IN Yanagisawa, Seiichi; Takasugi, Sumio; Takeyama, Shuichi

PA Yokohama Rubber Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09J163-00

ICS C09J163-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37, 39

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 02123185	A2	19900510	JP 1988-275269	19881031
PRAI JP 1988-275269		19881031		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 02123185	ICM	C09J163-00
	ICS	C09J163-00

AB Title compns., useful for bonding the terpolymers to **roofing** tiles, comprise 100 parts urethane-modified epoxy resins, 20-150 parts adhesion promoters, and curing agents. Thus, a **roofing** tile was coated with a composition of reaction product (epoxy equivalent 680) of glycidol with PTMG-tolylene diisocyanate copolymer 100, Hycar ATBN 1300X16 100, Adeka Hardner EH 270 20, 2,4,6-tri(dimethylaminomethyl)phenol-2, chlorinated butyl rubber 70, CaCO<sub>3</sub> 150, bentonite clay 150, MEK 300, and toluene 200 parts and bonded to an ethylene-propylene terpolymer sheet. The specimen showed 180° peel strength (kg/25 mm) 3.2 initially, 2.3 after immersion in H<sub>2</sub>O at 40° for 48 h, 2.5 after immersion in 0.1% aqueous NaOH at ambient temperature for 48 h, and 2.6 after heating at 80° for 48 h, vs. 2.2, 0.7, 0.8, and 1.0, resp., for bonding with a com. chloroprene **adhesive**.

ST epoxy urethane **adhesive** terpolymer rubber; ethylene propylene terpolymer rubber **adhesive**; adhesion promoter epoxy urethane **adhesive**; curing agent epoxy urethane **adhesive**; bonding **roofing** tile terpolymer rubber

IT Crosslinking agents

(epoxy-modified polyurethane **adhesive** compns. containing, for bonding ethylene-propylene terpolymer rubbers and **roofing tiles**)

IT **Adhesives**  
(epoxy-modified polyurethane compns., for bonding ethylene-propylene terpolymer rubbers and **roofing tiles**)

IT Rubber, synthetic  
RL: USES (Uses)  
(EPDM, bonding of, to **roofing tiles**, **adhesives** for)

IT Rubber, nitrile, uses and miscellaneous  
RL: MOA (Modifier or additive use); USES (Uses)  
(amine-terminated, crosslinking agents, epoxy-modified polyurethane **adhesive** compns. containing, for bonding ethylene-propylene terpolymer rubbers and **roofing tiles**)

IT Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(epoxy, **adhesives** containing adhesion promoters and curing agents and, for bonding ethylene-propylene terpolymer rubbers and **roofing tiles**)

IT Epoxy resins, uses and miscellaneous  
RL: USES (Uses)  
(polyurethane-, **adhesives** containing adhesion promoters and curing agents and, for bonding ethylene-propylene terpolymer rubbers and **roofing tiles**)

IT Tiles  
(**roof**, bonding of, to ethylene-propylene terpolymer rubbers, **adhesives** for)

IT 556-52-5D, Glycidol, reaction products with polyurethanes  
9069-50-5D, reaction products with glycidol 39378-01-3D, reaction products with glycidol  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**adhesives**, containing adhesion promoters and curing agents, for bonding ethylene-propylene terpolymer rubbers and **roofing tiles**)

IT 90451-84-6, Adeka EH 270  
RL: USES (Uses)  
(curing agents, epoxy-modified polyurethane **adhesive** compns. containing, for bonding ethylene-propylene terpolymer rubbers and **roofing tiles**)

IT 74-85-1  
RL: USES (Uses)  
(rubber, EPDM, bonding of, to **roofing tiles**, **adhesives** for)

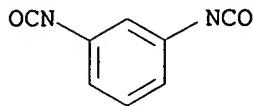
IT 9003-18-3  
RL: USES (Uses)  
(rubber, amine-terminated, crosslinking agents, epoxy-modified polyurethane **adhesive** compns. containing, for bonding ethylene-propylene terpolymer rubbers and **roofing tiles**)

IT 9069-50-5D, reaction products with glycidol 39378-01-3D, reaction products with glycidol  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**adhesives**, containing adhesion promoters and curing agents, for bonding ethylene-propylene terpolymer rubbers and **roofing tiles**)

RN 9069-50-5 HCPLUS

CN Poly(oxy-1,4-butanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy-, polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

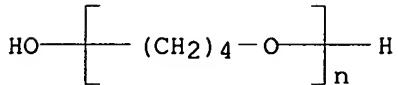
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

CM 2

CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS

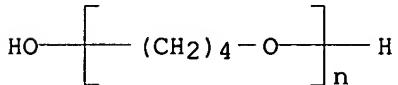


RN 39378-01-3 HCAPLUS

CN Poly(oxy-1,4-butanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy-, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

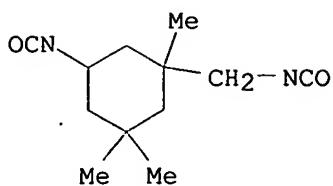
CM 1

CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS



CM 2

CRN 4098-71-9  
CMF C12 H18 N2 O2



L64 ANSWER 34 OF 48 JICST-EPlus COPYRIGHT 2004 JST on STN  
 AN 880389210 JICST-EPlus  
 TI Effects of glued joints in timber frame construction. For more beautiful and stronger wooden house.  
 AU IIZUKA GOROZO; ATAKA NOBUYUKI  
 TACHIBANA MASATOSHI; TAKAHASHI KIYOSHI; ENOMOTO HIROHITO  
 TAKAHASHI SHIGEO  
 CS Yokohama National Univ.  
 Yokohama National Univ., Graduate School  
 Asano Inst. of Technology  
 SO Jutaku Kenchiku Kenkyu Shoho, (1988) no. 14(1987), pp. 88,351-365. Journal  
 Code: S0422B (Fig. 23, Tbl. 10, Ref. 10)  
 ISSN: 0286-5947  
 CY Japan  
 DT Journal; Short Communication  
 LA Japanese  
 STA New  
 AB Significance of the experiments Timber structure should be strengthened by using bolts and metal fasteners. However, in case of traditional or esthetic design of wood building, as columns and **roof** trusses are disclosed, exposed metal fasteners are apt to be unsightly.. One of the ideas to solve this problem is to apply **adhesives** at the tenon-mortise joints of the construction on site. To secure final resistance(fallsafe) of the joint, L shaped metal connector could be nailed inside the wall covering. These reinforcements make a frame stiffer and stronger against lateral forces without any bearing wall or bracing. The adhesives used here should have the following properties, (1) "Open time" should be long enough for use on site. (2) Not subject to insensible any change of temperature and moisture when it is hardening. (3) Keeps ductility after setting. The author chose a modified **Urethane** glue for this purpose. To examine stiffness and strength of the T joint, 135 testpieces were tested by 27 categolies of tests to know the influence of, (1) species of the member, (2) sectional dimension of the member, (3) length of the tenon, (4) effect of the angle piece metal reinforcement. Test results and summary The experiments were conducted applying a lateral force to the top of the column 70cm apart from the sill. Rigidity of the joint could be determined by measuring angle of deformation caused by the load. Resutls are as follows; (1) Species HINOKI(Japanese Cypress) was the best not only in stiffness but also strength, as well as ductility. BEITSUGA(Hem-fir) followed next a little lower, and SUGI(Japanese Ceder). (2) Sectional dimension The wider the better in stiffness and strength especially in case of the short tenon. (3) Length of the tenon Specimens having long tenon was often broken at the last stage of the test. While short tenon was pulled out from the hole.(abridged author abst.)  
 CC RB03050S (692+)  
 CT **adhesive**; wooden structure; connection(joint); reinforcement;  
 dwelling house; building system; yield strength; wood  
 BT structure; joint(part); part; strengthening; modification; construction

method; mechanical property; property; strength; material

- L64 ANSWER 35 OF 48 JICST-EPlus COPYRIGHT 2004 JST on STN  
AN 870530158 JICST-EPlus  
TI Recent progress in engineering **adhesives**. 8. Application of reactive **adhesives** to automobile industry.  
SO Setchaku no Gijutsu (Adhesion Technology Japan), (1987) vol. 7, no. 1, pp. 58-63. Journal Code: G0890B (Fig. 8, Tbl. 4, Ref. 1)  
CODEN: SGIJE7; ISSN: 0289-8225  
CY Japan  
DT Journal; Commentary  
LA Japanese  
STA New  
CC YK03000X (665.931/.939)  
CT synthetic resin **adhesive**; epoxy resin; **polyurethane**; silicone rubber; structural **adhesive**; rubber cement; automobile; automotive window; glass; adhesion(bond); sun **roof**  
BT **adhesive**; polymer; thermosetting plastic; plastic; synthetic rubber; rubber; polysiloxane; inorganic polymer; automotive body structure; ceramics; bonding and joining
- L64 ANSWER 36 OF 48 COMPENDEX COPYRIGHT 2004 EEI on STN  
AN 1987(10):164866 COMPENDEX  
TI TESTING STRUCTURAL REQUIREMENTS FOR STATIONARY GLASS.  
AU Kirby, Michael D. (Essex Specialty Products Inc)  
MT SAE International Congress and Exposition.  
MO SAE, Warrendale, PA, USA  
ML Detroit, MI, USA  
MD 23 Feb 1987-27 Feb 1987  
SO SAE Technical Paper Series Publ by SAE, Warrendale, PA, USA 6p  
CODEN: STPSDN  
PY 1987  
MN 09796  
DT Conference Article  
LA English  
AB The use of **polyurethane** sealant **adhesive** for stationary glass bonding was advanced with the requirements set by the Federal Motor Vehicle Safety Standards. This requirement along with the demand to reduce vehicle weight led to the importance of using the glass as part of the **roof** structure. The paper discusses the evolution of the **adhesives** used in stationary glass bonding from rubber gaskets and polysulfides to **polyurethanes**. The science and technology of moisture cure **polyurethane** sealant **adhesive** systems and their performance criteria are described. (Edited author abstract) 7 refs.  
CC 415 Metals, Wood & Other Structural Materials; 662 Automotive Design & Manufacture; 812 Ceramics & Refractories; 804 Chemical Products; 817 Plastics, Products & Applications; 815 Plastics & Polymeric Materials  
CT \*AUTOMOBILE MATERIALS; **POLYURETHANES**; GLASS:Bonding;  
ADHESIVES  
ST AUTOMOBILE GLAZING MATERIALS; STATIONARY GLASS BONDING;  
**POLYURETHANE** SEALANT **ADHESIVE**
- L64 ANSWER 37 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1987:139480 HCPLUS  
DN 106:139480  
ED Entered STN: 01 May 1987  
TI Foamable **adhesives** for waterproofing of construction  
IN Mochizuki, Takashi; Nagayasu, Hisamitsu; Yamamori, Hiroshi

PA Toyo Rubber Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM E04D011-02  
 ICS C09J005-00

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61225454	A2	19861007	JP 1985-64817	19850328
PRAI JP 1985-64817		19850328		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 61225454	ICM	E04D011-02
		ICS C09J005-00

AB Construction is waterproofed by coating it with foamable **adhesives** in convex patterns and laminating a waterproof sheet before complete curing of the **adhesive**, which has an open cell-structure to enable gases to escape. This prevents layer separation caused by swelling. Thus, an 8-mm sheet was coated with 300 g/m<sup>2</sup> foamable **adhesives** containing 61:100 MDI-polypropylene glycol (I) copolymer and 2.5:100 4,4'-methylenedianiline-MDI-I copolymer, laminated with a 3-mm polyethylene foam sheet (expansion ratio 3000%), and coated with 1:1 100:18 I-TDI copolymer and 8:42:50 MOCA-talc-tar reaction product to give a composite with good water resistance (no change after 14 days in H<sub>2</sub>O at 40°).

ST foam **adhesive** waterproofing construction; **roofing** waterproofing foam **adhesive**; film plastic waterproofing **adhesive**; polyurethane foam **adhesive** waterproofing

IT Urethane polymers, uses and miscellaneous

RL: USES (Uses)  
 (adhesives, foamable, for waterproofing films for construction)

IT **Adhesives**  
 (foamable polyurethanes, for waterproofing membranes for construction)

IT Water-resistant materials  
 (membranes, for construction, foamable **adhesives** for)

IT Building materials  
 (waterproofing membranes for, foamable **adhesives** for)

IT 9022-71-3 37238-25-8

RL: USES (Uses)  
 (adhesives, foamable, for waterproofing films for construction)

IT 9002-88-4, Polyethylene  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (cellular, waterproofing films, **adhesives** for)

IT 9022-71-3 37238-25-8

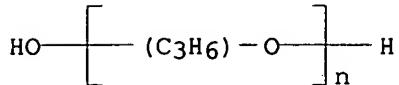
RL: USES (Uses)  
 (adhesives, foamable, for waterproofing films for construction)

RN 9022-71-3 HCPLUS

CN Benzenamine, 4,4'-methylenebis-, polymer with α-hydro-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

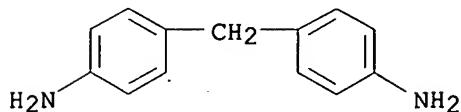
CM 1

CRN 25322-69-4  
CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> H<sub>2</sub>O  
CCI IDS, PMS



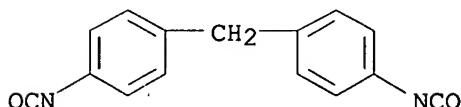
CM 2

CRN 101-77-9  
CMF C<sub>13</sub> H<sub>14</sub> N<sub>2</sub>



CM 3

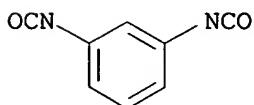
CRN 101-68-8  
CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



RN 37238-25-8 HCAPLUS  
CN Benzenamine, 4,4'-methylenebis[2-chloro-, polymer with  
1,3-diisocyanatomethylbenzene and  $\alpha$ -hydro- $\omega$ -  
hydroxypoly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

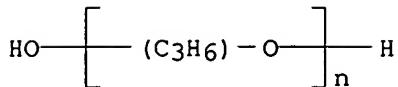
CRN 26471-62-5  
CMF C<sub>9</sub> H<sub>6</sub> N<sub>2</sub> O<sub>2</sub>  
CCI IDS



D1-Me

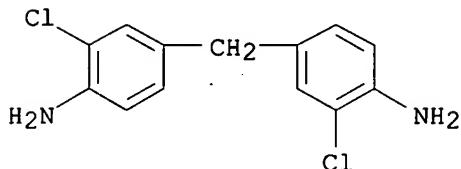
CM 2

CRN 25322-69-4  
 CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> H<sub>2</sub>O  
 CCI IDS, PMS



CM 3

CRN 101-14-4  
 CMF C<sub>13</sub>H<sub>12</sub>C<sub>12</sub>N<sub>2</sub>



L64 ANSWER 38 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1987:408458 HCPLUS  
 DN 107:8458  
 ED Entered STN: 11 Jul 1987  
 TI Polyurethane **adhesives** for bonding tie bars in wet environment  
 IN Cornely, Wolfgang; Mehesch, Heinz; Meyer, Frank  
 PA Bergwerksverband G.m.b.H., Fed. Rep. Ger.  
 SO Pat. Specif. (Aust.), 13 pp.  
 CODEN: ALXXAP  
 DT Patent  
 LA English  
 IC C09J003-16; C09J005-00; E21D020-02  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 58  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI AU 553594	B2	19860724	AU 1983-10060	19830105
AU 8310060	A1	19830721		
PRAI DE 1982-3200574		19820112		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
AU 553594	IC	C09J003-16IC C09J005-00IC E21D020-02

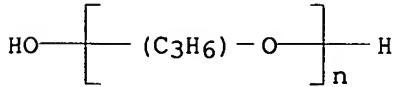
AB A fast-hardening **adhesive**, suitable for use in cementing tie bars, e.g. underground tunnel **roof** bolts, especially in wet bore holes, comprises prepolymer (mol. weight 800-500 resulting from the reaction of a polyisocyanate with  $\geq 1$  polyol) and 1-25% polyols (having OH number 250-2000) or water. Polypropylene glycol (having OH number 58 and average

mol. weight 2000) 500 g was added dropwise with stirring to 1000 g polyisocyanate (I, containing 31% NCO and prepared from phosgenation of PhNH<sub>2</sub>-HCHO condensates) at 40°, and the mixture was stirred at 60° for 12 h giving a prepolymer (II) with 19% NCO content and viscosity 2450 mPa s. Glass cartridge filled with 150 g II was placed in a wet borehole which had been preflushed with 15% watery glycerol containing 15% triethanolamine. The bolt rod was then inserted to destroy the cartridge to start the gelling (50 s) and after 24 h, the rod could be withdrawn using a 26 tons tractive force, vs. 4.5 (gelling time 1 min) when the cartridge was filled with I and the bore hole was preflushed with a polyol (prepared from ethylenediamine and propylene oxide) together with water.

- ST polyurethane **adhesive** tunnel **roof** bolt; PAPI  
 polyurethane **adhesive** two component; rapid hardening  
 polyurethane **adhesive**; water glycerol ethanolamine polyurethane  
**adhesive**
- IT Tunnels  
 (bonding bolts in holes of wet **roofs** in, rapid-hardening  
 2-component polyurethane **adhesives** for)
- IT Urethane polymers, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (manufacture of, as 2-component rapid-hardening **adhesives**, for  
 bonding bolts in wet holes of underground tunnel **roofs**)
- IT **Adhesives**  
 (fast-curing, two-component, polyurethane, for bonding bolts in wet  
 holes of underground tunnel **roofs**)
- IT 9016-87-9DP, PAPI, reaction products with molasses and polypropylene  
 glycol 25322-69-4DP, Polypropylene glycol, reaction products with  
 molasses and PAPI **53862-89-8P 108709-87-1P 108709-88-2P**  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (manufacture of, as 2-component rapid-hardening **adhesives**, for  
 bonding bolts in wet holes of underground tunnel **roofs**)
- IT **53862-89-8P 108709-87-1P 108709-88-2P**  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (manufacture of, as 2-component rapid-hardening **adhesives**, for  
 bonding bolts in wet holes of underground tunnel **roofs**)
- RN 53862-89-8 HCAPLUS
- CN Isocyanic acid, polymethylenepolyphenylene ester, polymer with  
 α-hydro-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA  
 INDEX NAME)

CM 1

CRN 25322-69-4  
 CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> H<sub>2</sub>O  
 CCI IDS, PMS



CM 2

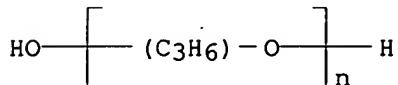
CRN 9016-87-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 108709-87-1 HCPLUS  
CN Isocyanic acid, polymethylenepolyphenylene ester, polymer with  
 $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)] and  
1,2,3-propanetriol (9CI) (CA INDEX NAME)

CM 1

CRN 25322-69-4  
CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> H<sub>2</sub>O  
CCI IDS, PMS



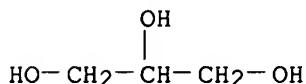
CM 2

CRN 9016-87-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

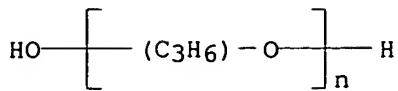
CRN 56-81-5  
CMF C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>



RN 108709-88-2 HCPLUS  
CN Isocyanic acid, polymethylenepolyphenylene ester, polymer with  
 $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)],  
2,2',2'''-nitrilotris[ethanol] and 1,2,3-propanetriol (9CI) (CA INDEX  
NAME)

CM 1

CRN 25322-69-4  
CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> H<sub>2</sub>O  
CCI IDS, PMS



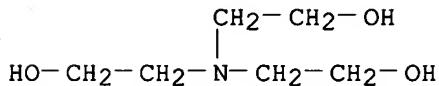
CM 2

CRN 9016-87-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

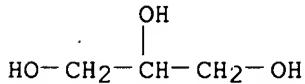
CM 3

CRN 102-71-6  
CMF C6 H15 N O3



CM 4

CRN 56-81-5  
CMF C3 H8 O3



L64 ANSWER 39 OF 48 JICST-EPlus COPYRIGHT 2004 JST on STN  
AN 870166718 JICST-EPlus  
TI Prospect series for new painting material. 2. Finishing coating material  
of silicon family.  
AU HASHI KOICHIRO  
CS Toshiba Silicone Co., Ltd.  
SO Kokyo Toso, (1986) vol. 14, no. 4, pp. 57-68. Journal Code: Y0414A (Fig.  
6, Tbl. 22)  
ISSN: 0911-7873  
CY Japan  
DT Journal; Standard  
LA Japanese  
STA New  
CC YJ03060I; YJ04040T (667.633/.638; 667.64/.661+)  
CT silicone resin; synthetic resin adhesive; heat resistance;  
weather resistance; durability; paint film; concrete; mortar; water  
repellent finishing; silicone rubber; rubber base coatings;  
polyurethane coatings; acrylic resin coatings; painting; building  
material; roof(building); wall material  
BT thermosetting plastic; plastic; polysiloxane; inorganic polymer; polymer;

**adhesive; resistance(endure); film(cover); membrane and film; working and processing; synthetic rubber; rubber; coating material(paint); synthetic resin coatings; surface treatment; treatment; construction material; material**

L64 ANSWER 40 OF 48 COMPENDEX COPYRIGHT 2004 EEI on STN  
 AN 1985(11):153996 COMPENDEX DN \*851105; 851197574  
 TI Eri Oy-Paints from Espoo, **Adhesives** and Sealants from Valkeakoski.  
 ERI OY - TEOLLISUUS- JA RAKENNUSMAALEJA ESPOON SUOMENOJALTA, LIIMOJA JA SAUMAUSSAMOJA VALKEAKOSKELTA.  
 AU Valjakka, Dl Simo (Eri Oy, Espoo, Finl)  
 SO Kem Kem v 12 n 6 1985 p 530-532  
 CODEN: KMKMAA ISSN: 0355-1628  
 PY 1985  
 DT Journal  
 TC Experimental  
 LA Finnish  
 AB Eri Oy manufactures products of high quality for both industry and professional painters and is a pioneer in this field. As the fruits of extensive research and development work may be mentioned the following products: Aquatex Furniture Varnish - the first water-based varnish in Finland; Aquasol Wood Preservative - a water-based, effective wood preservative against blueing and fungus; Aquatex **Roof** Paint - a water-based and flexible **roof** sheet paint; Aquatex Primer - an anticorrosive paint for the metal industry. In addition, Eri Oy manufactures a wide variety of solvent-based paints and lacquers for the wood, metal and plastic industries. Their specialty is **polyurethanes.** (Edited author abstract) In Finnish with English abstract.  
 CC 804 Chemical Products; 815 Plastics & Polymeric Materials; 539 Metals Corrosion & Protection; 813 Coatings & Finishes  
 CT \***ADHESIVES:**Manufacture; PAINT:Manufacture; PROTECTIVE COATINGS:Manufacture  
 ST CAR PAINT; SOLVENT-BASED PAINTS; ANTICORROSIVE PAINT  
 ET In

L64 ANSWER 41 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1985:63743 HCAPLUS  
 DN 102:63743  
 ED Entered STN: 24 Feb 1985  
 TI Polyurethane preparations containing crosslinking combinations and their use as heat-activated **adhesive** coatings  
 IN Thoma, Wilhelm; Pedain, Josef; Nachtkamp, Klaus; Schroeer, Walter  
 PA Bayer A.-G. , Fed. Rep. Ger.  
 SO Ger. Offen., 48 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC C09D003-72; D06N003-14  
 CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 40  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3313238	A1	19841018	DE 1983-3313238	19830413
	EP 122554	A2	19841024	EP 1984-103784	19840405
	EP 122554	A3	19861203		
	EP 122554	B1	19900328		

R: BE, DE, FR, GB, IT, NL  
 HU 40476 A2 19861228 HU 1984-1439 19840412  
 HU 197368 B 19890328  
 PRAI DE 1983-3313238 19830413  
 CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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DE 3313238 IC C09D003-72IC D06N003-14

AB Primers with good wet and dry adhesion, useful on textiles, contain polyurethanes prepared with 0.1-2.5 mol chain extender/mol. high-mol.-weight polyol and 4-30 phr crosslinker containing 0.5-20 phr HCHO resin and 0.5-20 phr polyisocyanate, optionally blocked. Thus, a release paper was coated with .apprx.35 g/m<sup>2</sup> (dry basis) topcoat composition (a 35% polyester-polyurethane solution containing 8% TiO<sub>2</sub>), dried, coated with .apprx.25 g/m<sup>2</sup>

(dry basis) primer containing 900 g 50% solution of polyurethane [9046-11-1] [from poly(ethylene adipate) 1000, poly(oxydiethylene adipate) 1000, diethylene glycol 31.8, and TDI 230 g] in 4:4:3 DMF-MEK-PhMe, 40 g melamine resin, 10 g catalyst (190:101:709 p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H-4-methylmorpholine-DMF), and 50 g 75% solution of hexamethylene isocyanate isocyanurate derivative blocked with di-Et malonate-Et acetoacetate, dried at 60-80°, activated on a 120° roll, laminated to a polyester fabric (120 g/m<sup>2</sup>), and cured at 120-160° for 2 min to give a coating with wet and dry adhesion 18-22 and 20-25 N/2.5 m, compared with 6-8 and 8-10 without the blocked isocyanate, and 7-10 and 10-12 without the melamine resin.

ST polyurethane primer textile; primer inverse coating textile; crosslinker polyurethane primer; melamine resin crosslinker; isocyanate blocked crosslinker; polyester polyurethane primer

IT Crosslinking agents

(aminoplasts and polyisocyanates, for polyurethane primers for textiles)

IT Textiles

Acrylic fibers, uses and miscellaneous  
 Polyamide fibers, uses and miscellaneous  
 Polyester fibers, uses and miscellaneous

RL: USES (Uses)

(primers for, polyurethanes as)

IT Coating materials

(primers, polyurethanes, for textiles)

IT 77-99-6D, reaction products with TDI and butanediol 96-29-7D, reaction products with hexamethylene isocyanate 101-68-8D, reaction products with tripropylene glycol 105-53-3D, reaction products with hexamethylene isocyanate 107-88-0D, reaction products with TDI and trimethylolpropane 141-97-9D, reaction products with hexamethylene isocyanate 822-06-0D, blocked derivs. 4035-89-6 9011-05-6 24800-44-0D, reaction products with MDI 26471-62-5D, isocyanurate derivs.

RL: MOA (Modifier or additive use); USES (Uses)

(crosslinking agents, for polyurethane primers for textiles)

IT 9046-11-1 9068-96-6 26375-23-5  
 50658-30-5 64116-46-7 65328-15-6  
 71106-51-9 84909-31-9 86417-12-1  
 94614-05-8 94642-12-3 94642-13-4  
 94642-14-5 94642-15-6

RL: USES (Uses)

(primers, for textiles)

IT 9046-11-1 9068-96-6 26375-23-5  
 50658-30-5 64116-46-7 65328-15-6  
 71106-51-9 84909-31-9 86417-12-1

94614-05-8 94642-12-3 94642-13-4

94642-14-5 94642-15-6

RL: USES (Uses)

(primers, for textiles)

RN 9046-11-1 HCPLUS

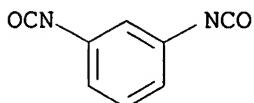
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene,  
1,2-ethanediol and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

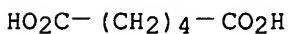


D1-Me

CM 2

CRN 124-04-9

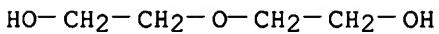
CMF C6 H10 O4



CM 3

CRN 111-46-6

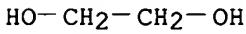
CMF C4 H10 O3



CM 4

CRN 107-21-1

CMF C2 H6 O2

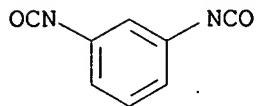


RN 9068-96-6 HCPLUS

CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene and  
1,6-hexanediol (9CI) (CA INDEX NAME)

CM 1

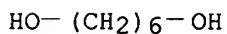
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

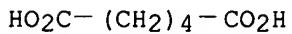
CM 2

CRN 629-11-8  
CMF C6 H14 O2



CM 3

CRN 124-04-9  
CMF C6 H10 O4

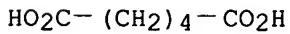


RN 26375-23-5 HCAPLUS

CN Hexanedioic acid, polymer with 1,4-butanediol and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

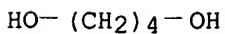
CM 1

CRN 124-04-9  
CMF C6 H10 O4



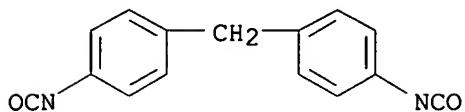
CM 2

CRN 110-63-4  
CMF C4 H10 O2



CM 3

CRN 101-68-8  
CMF C15 H10 N2 O2

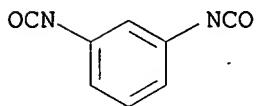


RN 50658-30-5 HCAPLUS

CN 1,4-Butanediol, polymer with 1,3-diisocyanatomethylbenzene and  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

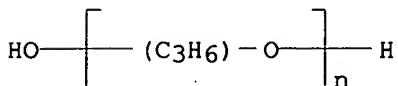
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

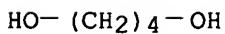
CM 2

CRN 25322-69-4  
CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> H<sub>2</sub>O  
CCI IDS, PMS



CM 3

CRN 110-63-4  
CMF C4 H10 O2



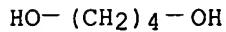
RN 64116-46-7 HCAPLUS

CN 1,4-Butanediol, polymer with 1,1'-methylenebis[4-isocyanatobenzene],  
methyloxirane, methyloxirane polymer with oxirane ether with  
2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) and oxirane (9CI) (CA  
INDEX NAME)

CM 1

CRN 110-63-4

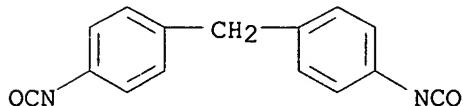
CMF C4 H10 O2



CM 2

CRN 101-68-8

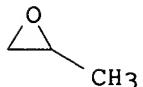
CMF C15 H10 N2 O2



CM 3

CRN 75-56-9

CMF C3 H6 O



CM 4

CRN 75-21-8

CMF C2 H4 O



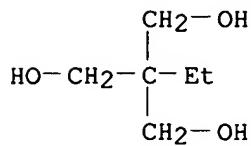
CM 5

CRN 52624-57-4

CMF C<sub>6</sub> H<sub>14</sub> O<sub>3</sub> . 3 (C<sub>3</sub> H<sub>6</sub> O . C<sub>2</sub> H<sub>4</sub> O)x

CM 6

CRN 77-99-6  
CMF C6 H14 O3

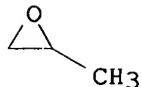


CM 7

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 8

CRN 75-56-9  
CMF C3 H6 O



CM 9

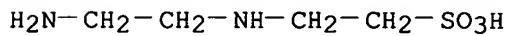
CRN 75-21-8  
CMF C2 H4 O



RN 65328-15-6 HCPLUS  
CN Hexanedioic acid, polymer with 2-[(2-aminoethyl)amino]ethanesulfonic acid monosodium salt, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol and 1,6-hexanediol (9CI) (CA INDEX NAME)

CM 1

CRN 34730-59-1  
CMF C4 H12 N2 O3 S . Na



● Na

CM 2

CRN 822-06-0  
CMF C8 H12 N2 O2

OCN-(CH<sub>2</sub>)<sub>6</sub>-NCO

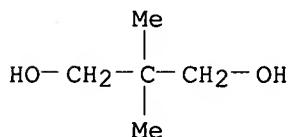
CM 3

CRN 629-11-8  
CMF C6 H14 O2

HO-(CH<sub>2</sub>)<sub>6</sub>-OH

CM 4

CRN 126-30-7  
CMF C5 H12 O2



CM 5

CRN 124-04-9  
CMF C6 H10 O4

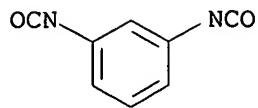
HO<sub>2</sub>C-(CH<sub>2</sub>)<sub>4</sub>-CO<sub>2</sub>H

RN 71106-51-9 HCAPLUS

CN Hexanedioic acid, polymer with 1,4-butanediol, 1,3-diisocyanatomethylbenzene, 2,2-dimethyl-1,3-propanediol and 1,6-hexanediol (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

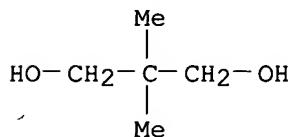
CM 2

CRN 629-11-8  
CMF C6 H14 O2

HO-(CH<sub>2</sub>)<sub>6</sub>-OH

CM 3

CRN 126-30-7  
CMF C5 H12 O2



CM 4

CRN 124-04-9  
CMF C6 H10 O4

HO<sub>2</sub>C-(CH<sub>2</sub>)<sub>4</sub>-CO<sub>2</sub>H

CM 5

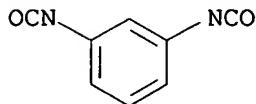
CRN 110-63-4  
CMF C4 H10 O2

HO-(CH<sub>2</sub>)<sub>4</sub>-OH

RN 84909-31-9 HCAPLUS  
CN Hexanedioic acid, polymer with 1,3-butanediol, 1,3-diisocyanatomethylbenzene and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

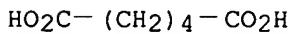
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

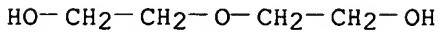
CM 2

CRN 124-04-9  
CMF C6 H10 O4



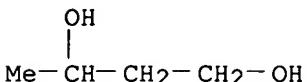
CM 3

CRN 111-46-6  
CMF C4 H10 O3



CM 4

CRN 107-88-0  
CMF C4 H10 O2

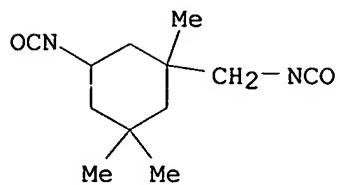


RN 86417-12-1 HCAPLUS

CN Hexanedioic acid, polymer with 1,6-diisocyanatohexane,  
2,2-dimethyl-1,3-propanediol, 1,6-hexanediol, hydrazine and  
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA  
INDEX NAME)

CM 1

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 2

CRN 822-06-0  
CMF C8 H12 N2 O2

OCN- (CH<sub>2</sub>)<sub>6</sub>- NCO

CM 3

CRN 629-11-8  
CMF C6 H14 O2

HO- (CH<sub>2</sub>)<sub>6</sub>- OH

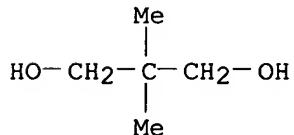
CM 4

CRN 302-01-2  
CMF H4 N2

H<sub>2</sub>N- NH<sub>2</sub>

CM 5

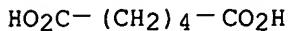
CRN 126-30-7  
CMF C5 H12 O2



CM 6

CRN 124-04-9

CMF C6 H10 O4



RN 94614-05-8 HCAPLUS

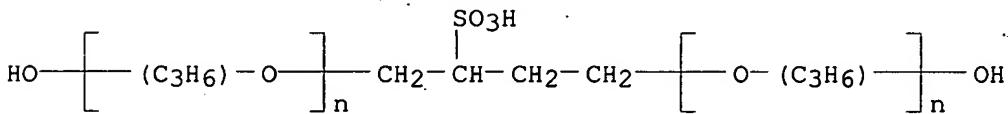
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene,  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)], methyloxirane polymer with oxirane monobutyl ether, 2,2'-oxybis[ethanol] and  $\alpha,\alpha'$ -(2-sulfo-1,4-butanediyl)bis[ $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)]] monosodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 59871-54-4

CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> C4 H10 O5 S . Na

CCI IDS, PMS



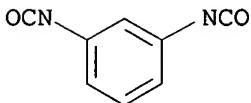
● Na

CM 2

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



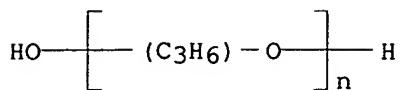
D1-Me

CM 3

CRN 25322-69-4

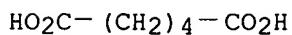
CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> H2 O

CCI IDS, PMS



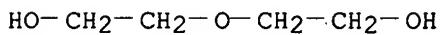
CM 4

CRN 124-04-9  
CMF C6 H10 O4



CM 5

CRN 111-46-6  
CMF C4 H10 O3

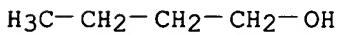


CM 6

CRN 9038-95-3  
CMF C4 H10 O . (C3 H6 O . C2 H4 O)x

CM 7

CRN 71-36-3  
CMF C4 H10 O

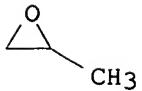


CM 8

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 9

CRN 75-56-9  
CMF C3 H6 O



CM 10

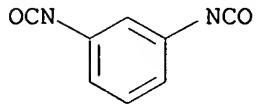
CRN 75-21-8  
CMF C<sub>2</sub> H<sub>4</sub> O



RN 94642-12-3 HCAPLUS  
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene,  
2,2-dimethyl-1,3-propanediol, 1,6-hexanediol, hydrazine and  
4,4'-methylenebis[cyclohexanamine] (9CI) (CA INDEX NAME)

CM 1

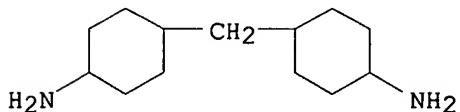
CRN 26471-62-5  
CMF C<sub>9</sub> H<sub>6</sub> N<sub>2</sub> O<sub>2</sub>  
CCI IDS



D1-Me

CM 2

CRN 1761-71-3  
CMF C<sub>13</sub> H<sub>26</sub> N<sub>2</sub>



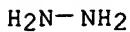
CM 3

CRN 629-11-8  
CMF C<sub>6</sub> H<sub>14</sub> O<sub>2</sub>

HO-(CH<sub>2</sub>)<sub>6</sub>-OH

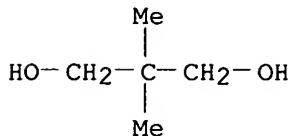
CM 4

CRN 302-01-2  
CMF H4 N2



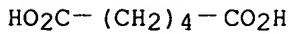
CM 5

CRN 126-30-7  
CMF C5 H12 O2



CM 6

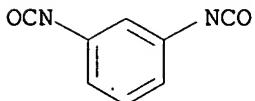
CRN 124-04-9  
CMF C6 H10 O4



RN 94642-13-4 HCAPLUS  
CN Hexanedioic acid, polymer with 1,4-butanediol, 1,3-diisocyanatomethylbenzene, 1,6-hexanediol and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



CM 2

CRN 629-11-8  
CMF C6 H14 O2

HO—(CH<sub>2</sub>)<sub>6</sub>—OH

CM 3

CRN 124-04-9  
CMF C<sub>6</sub> H<sub>10</sub> O<sub>4</sub>

HO<sub>2</sub>C—(CH<sub>2</sub>)<sub>4</sub>—CO<sub>2</sub>H

CM 4

CRN 111-46-6  
CMF C<sub>4</sub> H<sub>10</sub> O<sub>3</sub>

HO—CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—OH

CM 5

CRN 110-63-4  
CMF C<sub>4</sub> H<sub>10</sub> O<sub>2</sub>

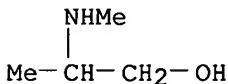
HO—(CH<sub>2</sub>)<sub>4</sub>—OH

RN 94642-14-5 HCAPLUS

CN 1-Propanol, 2-(methylamino)-, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, 1,3-diisocyanatomethylbenzene and  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

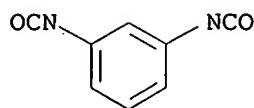
CM 1

CRN 27646-78-2  
CMF C<sub>4</sub> H<sub>11</sub> N O



CM 2

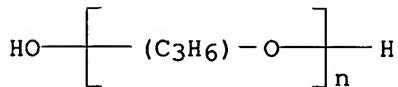
CRN 26471-62-5  
CMF C<sub>9</sub> H<sub>6</sub> N<sub>2</sub> O<sub>2</sub>  
CCI IDS



D1-Me

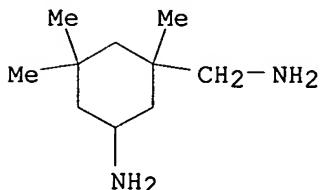
CM 3

CRN 25322-69-4  
CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> H<sub>2</sub>O  
CCI IDS, PMS



CM 4

CRN 2855-13-2  
CMF C<sub>10</sub> H<sub>22</sub> N<sub>2</sub>

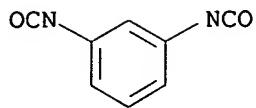


RN 94642-15-6 HCAPLUS

CN Hexanedioic acid, polymer with 1,3-butanediol, 1,3-diisocyanatomethylbenzene, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

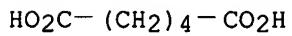
CRN 26471-62-5  
CMF C<sub>9</sub> H<sub>6</sub> N<sub>2</sub> O<sub>2</sub>  
CCI IDS



D1-Me

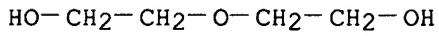
CM 2

CRN 124-04-9  
CMF C6 H10 O4



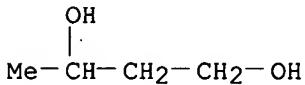
CM 3

CRN 111-46-6  
CMF C4 H10 O3



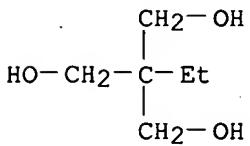
CM 4

CRN 107-88-0  
CMF C4 H10 O2



CM 5

CRN 77-99-6  
CMF C6 H14 O3



AN 1984(9):147606 COMPENDEX DN 840987684; \*8419550  
 TI GROUT INJECTION SOLVES ROOF PROBLEMS.  
 AU Anon  
 SO Coal Age v 89 n 6 Jun 1984 p 77  
 CODEN: COLAA7 ISSN: 0009-9910  
 PY 1984  
 LA English  
 AB The process injects a special two-component polyurethane formulation under pressure into cracked and broken roof. The chemicals cure and solidify into an expanded polyurethane, binding the structure into a homogeneous mass. Polyurethane solidifies in about three minutes, and cures in two hours to 90% of its final mechanical and adhesive strength.  
 CC 503 Mines & Mining, Coal  
 CT \*COAL MINES AND MINING:Roof Control

L64 ANSWER 43 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1982:583688 HCAPLUS

DN 97:183688  
 ED Entered STN: 12 May 1984  
 TI Double faced insulating board  
 IN Davis, Duane A.  
 PA GAF Corp., USA  
 SO U.S., 6 pp.  
 CODEN: USXXAM

DT Patent

LA English

IC B32B003-26; B32B005-18; B32B007-14

NCL 428198000

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4351873	A	19820928	US 1980-174045	19800731
PRAI US 1980-174045		19800731		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
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US 4351873	IC	B32B003-26IC	B32B005-18IC	B32B007-14
	NCL	428198000		

AB Double-faced polyurethane foam thermal insulating boards for roofs in which the 1st facing is adhered directly to the foam and the 2nd facing is intermittently adhered to and spaced from the 1st facing by areas of adhesive allow unrestricted lateral venting of gases from between the facings to the edges of the board. Thus, a polyurethane foam board was prepared by applying a mixture comprising PAPI 143.58, sucrose amine polyol 77.0, chlorinated polyol 24.7, water 0.75, surfactant 1.8, catalyst 0.8, and CCl3F 32.0 parts to a continuous sheet of asphalt-saturated roofing felt. A 2nd continuous sheet of asphalt-saturated roofing felt was laid on top of the mixture, and the sandwich was laminated to give a product having thickness 38 mm. The continuous board was cut into units of appropriate size, and a 2nd faced of nonwoven glass fiber mat saturated on 1 side with an asphalt-clay emulsion was applied to 1 side of the laminate using asphalt in uniformly spaced spots as the adhesive. When asphalt was applied (for roofing) to the double-faced board, there was no frothing of the asphalt, and the base sheet laid tightly against the insulator board, whereas with a standard board, vigorous bubbling or frothing of the asphalt occurred, and slight lifting of the base sheet occurred as

the trapped vapor forced the base sheet away from the insulator board.

ST **Polyurethane** foam insulator board; asphalt felt glass  
**Polyurethane** laminate

IT Thermal insulators  
(asphalt-felt-glass fiber-**Polyurethane** foam laminates, for  
roofs and walls)

IT Plastics, laminated  
RL: USES (Uses)  
(asphalt-felt-glass fiber-**Polyurethane** foam, as thermal  
insulators)

IT **Urethane** polymers, uses and miscellaneous  
RL: TEM (Technical or engineered material use); USES (Uses)  
(cellular, laminates with asphalt and felt and glass fibers, as thermal  
insulators)

IT Glass fibers, uses and miscellaneous  
RL: USES (Uses)  
(laminates with asphalt and felt and **Polyurethane** foam, as  
thermal insulators)

IT Asphalt  
RL: USES (Uses)  
(laminates with felt and glass fibers and **Polyurethane** foam,  
as thermal insulators)

IT **Roofing**  
(thermal insulators for, asphalt-felt-glass fiber-**Polyurethane**  
foam laminates as)

IT Textiles  
(felt, laminates with asphalt and glass fibers and **Polyurethane**  
foam, as thermal insulators)

L64 ANSWER 44 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN

AN 1977:486066 HCPLUS

DN 87:86066

ED Entered STN: 12 May 1984

TI **Adhesive** tape provided with hardenable **adhesive**  
composition

IN Bengtsson, O.

PA Svenska ICI AB, Swed.

SO Swed., 7 pp.

CODEN: SSXXAY

DT Patent

LA Swedish

IC C09J007-02

CC 37-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SE 385917	B	19760726	SE 1973-3462	19730313
	SE 385917	C	19761104		
PRAI	SE 1973-3462		19730313		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
SE 385917	IC	C09J007-02

AB **Adhesives** which harden to a dimensionally stable polymer on exposure to air are surrounded by a gas-tight shield which is removed before application of the **adhesive** tape in the building industry, e.g. **roof** coverings, or for manufacturing mass-produced articles e.g. boat hulls, buoys, etc. Thus, a glass fiber carrier is impregnated with a mixture of polypropylene glycol ether 100,

tris(β-chloroethyl) phosphate [115-96-8] 50, cement filler 50, and diphenylmethylenediisocyanate 120 parts, covered with a polyethylene film on each side to completely shield from the effects of the atmospheric, and rolled up during storage in isocyanate-terminated prepolymer [52409-10-6] forms. The polyethylene films are removed just before utilization of the tape.

ST adhesive tape polyurethane; building material polyurethane adhesive; cement filler polyurethane adhesive

IT Glass fibers, uses and miscellaneous  
Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(adhesive tapes, air-curable)

IT Adhesive tapes  
(adhesives for, air-curable polyurethanes as)

IT Building materials  
(air-curable adhesive tapes for)

IT Cement  
(fillers, for air-curable polyurethane adhesive tapes)

IT 52409-10-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, in air-curable adhesive tapes)

IT 115-96-8  
RL: USES (Uses)  
(in air-curable polyurethane adhesive tapes)

IT 52409-10-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, in air-curable adhesive tapes)

RN 52409-10-6 HCAPLUS

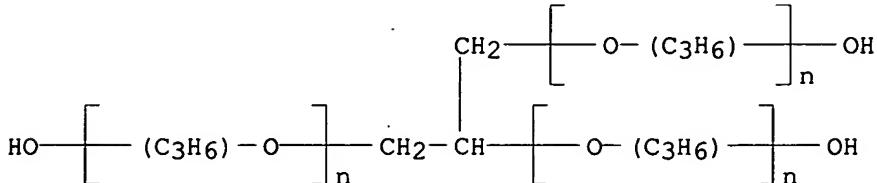
CN Poly[oxy(methyl-1,2-ethanediyl)], α,α',α''-1,2,3-propanetriyltris[ω-hydroxy-, polymer with 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 25791-96-2

CMF (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> (C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub> C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>

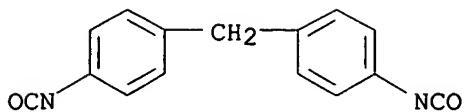
CCI IDS, PMS



CM 2

CRN 101-68-8

CMF C<sub>15</sub>H<sub>10</sub>N<sub>2</sub>O<sub>2</sub>



L64 ANSWER 45 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1976:123020 HCAPLUS

DN 84:123020

ED Entered STN: 12 May 1984

TI Textile laminates

IN Phillips, Michael John

PA Hairlok Ltd., UK

SO Brit., 3 pp.

CODEN: BRXXAA

DT Patent

LA English

IC B32B

CC 37-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1415852	A	19751126	GB 1972-5336	19730122
	IT 977035	A	19740910	IT 1973-47873	19730124
	CA 973790	A1	19750902	CA 1973-161960	19730124
	JP 48087161	A2	19731116	JP 1973-11222	19730129
	BE 794953	A1	19730529	BE 1973-127237	19730202
	NL 7301498	A	19730807	NL 1973-1498	19730202
	DE 2305576	A1	19730809	DE 1973-2305576	19730205
	FR 2170783	A5	19730914	FR 1973-3985	19730205
PRAI	GB 1972-5336		19730122		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

GB 1415852 IC B32B

AB Carpets, **roof** linings, and seat covers for automobiles were manufactured by bonding a fabric to a closed-cell crosslinked thermoformable polyethylene [9002-88-4] foam and optionally molding the laminate. Thus, a nylon-66 warp knitted fabric with >40-50% stretch in each direction was bonded with Desmocoll 400 [11116-57-7] to a 2 mm thick polyethylene foam sheet of 30-fold expansion. The foam side of the laminate was exposed to an ir heater until it was thermoformable and the laminate was vacuum molded into fluted car seat covers which were cooled and filled with .apprx.3 in. thick cold cure polyurethane foam cushioning. The seat had good appearance and was comfortable to sit on even in conditions where impermeable plastic upholstery was unsatisfactory.

ST automobile upholstery molded laminate; carpet automobile molded laminate; seat cover automobile laminate; **roof** lining automobile laminate; cellular polyethylene textile laminate; nylon polyethylene molded laminate

IT Automobiles

(carpets, **roof** linings, and covers for, from molded laminates of cellular polyethylene)

IT Carpets

Upholstery  
(for automobiles, from molded laminates of cellular polyethylene)

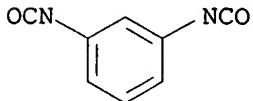
IT Textiles

(laminates, with polyethylene foam, for automotive use)

IT Lamination  
(of textiles, with polyethylene foam, for automotive use)  
IT 9019-92-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, for bonding textiles to polyethylene)  
IT 9002-88-4  
RL: USES (Uses)  
(cellular, cushioning molded laminates of, for automobile carpets,  
roof linings, and seat covers)  
IT 9019-92-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, for bonding textiles to polyethylene)  
RN 9019-92-5 HCPLUS  
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene and  
1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

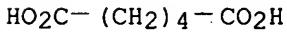
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

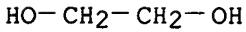
CM 2

CRN 124-04-9  
CMF C6 H10 O4



CM 3

CRN 107-21-1  
CMF C2 H6 O2



L64 ANSWER 46 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1974:537051 HCPLUS  
DN 81:137051  
ED Entered STN: 12 May 1984  
TI Bonding agent composition

IN Nakano, Fumio; Ito, Ken; Moniwa, Yoshihiro  
 PA Hitachi, Ltd.  
 SO Jpn. Tokkyo Koho, 4 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

IC C09J; C08G

CC 36-6 (Plastics Manufacture and Processing)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 48041927	B4	19731210	JP 1970-39322	19700511
PRAI JP 1970-39322		19700511		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 48041927	IC	C09JIC C08G

AB The low-temperature curing **adhesive** composition contains a polyisocyanate, a modified aromatic polyamine derived from aromatic polyamine having .geq.2 Ph groups/mol. and an alicyclic epoxide with .geq.1 epoxy groups/mol., and 2-10 weight% of an organometallic compound. Thus, 100 parts diaminodiphenyl sulfone and 100 parts Chissonox 206 (alicyclic diepoxide) were stirred 6 hr at 60.deg. to give a modified polyamine. A composition of polyisocyanate derived from a 20:5 mixture of polytetramethylene glycol of mol. weight 2000 and 2,4-tolylene diisocyanate 100, the above modified polyamine 15, and Pb naphthenate 5 parts having viscosity 3200 P and pot life 45 min at 20.deg. was applied to 2 degreased Fe plates, and the plates were bonded and left 12 hr at 20.deg.. The tensile **adhesive** strength of the bonding was 62 kg/cm<sup>2</sup>. A test piece prepared from the **adhesive** composition had tensile strength 89 kg/cm<sup>2</sup> and elongation 560%.

ST **adhesive** room temp curing; polyisocyanate **adhesive**; epoxide alicyclic modified polyamine; organometallic crosslinking catalyst

IT Naphthenic acids, compounds

RL: USES (Uses)  
 (lead salts, crosslinking catalysts, for polyurethane-polyurea **adhesives**)

IT **Adhesives**  
 (polyurea-polyurethane, room-temperature curing)

IT 52766-58-2

RL: USES (Uses)  
 (**adhesives**, containing dibutyltin dilaurate, room-temperature curing)

IT 52735-15-6

RL: USES (Uses)  
 (**adhesives**, containing lead naphthenate, room-temperature curing)

IT 77-58-7

RL: CAT (Catalyst use); USES (Uses)  
 (crosslinking catalysts, for polyurethane-polyurea **adhesives**)

IT 52766-58-2

RL: USES (Uses)  
 (**adhesives**, containing dibutyltin dilaurate, room-temperature curing)

RN 52766-58-2 HCPLUS

CN Benzenamine, 4,4'-methylenebis[2-chloro-, polymer with Chissonox 101, 2,4-diisocyanato-1-methylbenzene and  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) (9CI) (CA INDEX NAME)

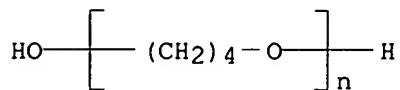
CM 1

CRN 52682-87-8  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

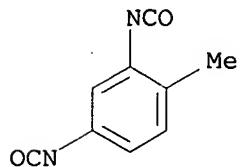
CM 2

CRN 25190-06-1  
CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub>O  
CCI PMS



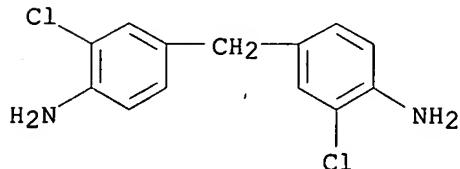
CM 3

CRN 584-84-9  
CMF C<sub>9</sub> H<sub>6</sub> N<sub>2</sub> O<sub>2</sub>



CM 4

CRN 101-14-4  
CMF C<sub>13</sub> H<sub>12</sub> Cl<sub>2</sub> N<sub>2</sub>



IT 52735-15-6

RL: USES (Uses)

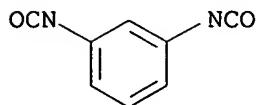
(adhesives, containing lead naphthenate, room-temperature curing)

RN 52735-15-6 HCAPLUS

CN Benzenamine, 4,4'-sulfonylbis-, polymer with 1,3-diisocyanatomethylbenzene,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 3-oxiranyl-7-oxabicyclo[4.1.0]heptane (9CI) (CA INDEX NAME)

CM 1

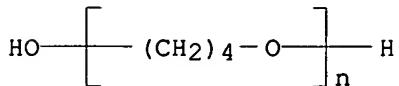
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

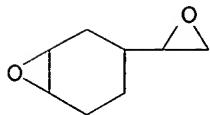
CM 2

CRN 25190-06-1  
CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
CCI PMS



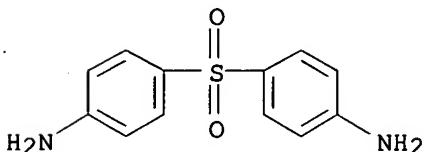
CM 3

CRN 106-87-6  
CMF C<sub>8</sub> H<sub>12</sub> O<sub>2</sub>



CM 4

CRN 80-08-0  
CMF C<sub>12</sub> H<sub>12</sub> N<sub>2</sub> O<sub>2</sub> S



L64 ANSWER 47 OF 48 COMPENDEX COPYRIGHT 2004 EEI on STN  
AN 1970(12):4861 COMPENDEX DN 701257799

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

TI Some highlights of 1969.

AU ANON

SO Appl Plast v 12 n 12 Dec 1969 p 15-31

CODEN: APTCA

PY 1969

LA English

AB Review of new plastics applications, new materials introduced, and new machinery and techniques developed during the year. Examples of many applications are given in construction, housing, packaging, housewares, engineering, etc. Building applications include- **polyurethane** insulation, PVC cladding systems, composite **roofings**, new **adhesives**, automatic strapping machine, cold molding press range, new double tools for pressure pipe production, pipe extrusion heads for pipes of small diameter, coating equipment, gun welder, multicolor molding machine, and new large range of hydraulic injection molding machines.

57799

CC 816 Plastics, Plant Equipment &amp; Processes; 817 Plastics, Products &amp; Applications

CT \*PLASTICS INDUSTRY:United Kingdom; PLASTICS MACHINERY

L64 ANSWER 48 OF 48 HCPLUS COPYRIGHT 2004 ACS on STN

AN 1969:422692 HCPLUS

DN 71:22692

ED Entered STN: 12 May 1984

TI Roofing materials

IN Funk, Smith A.; Klasen, Charles J.; Malone, James J., Jr.

PA Allied Chemical Corp.

SO Fr., 11 pp.

CODEN: FRXXAK

DT Patent

LA French

IC E04D; B29D; C08F

CC 37 (Plastics Fabrication and Uses)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 1529759		19680621		
US 3483664		19690000	US	
PRAI US		19660513		
US		19670419		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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FR 1529759	IC	E04DIC	B29DIC	C08F
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AB A mixture of chlorinated polyethylenes (10% containing 40% Cl, 90% containing 30%

Cl, glass-transition temperature -10°) 100, CaCO<sub>3</sub> 150, 3,4-epoxy-6-methylcyclohexylmethyl 3,4-epoxy-6-methylcyclohexanecarboxylate 3, pentaerythritol 1, 2,6-ditert-butyl-4-methylphenol (Ionol) 1, carbon black 3, and dioctyl phthalate 6.4 parts are milled at 160° and calendered at 165.5-171.1° to give 2 sheets, which are pressed on either side of a fabric of glass fibers at 150° and 5.63 kg./cm.<sup>2</sup> to prepare a laminate (0.61 mm. thick). This laminate is bonded to an open-celled, flexible **polyurethane** foam. This assembly, which does not blister because water vapor can pass through the foam, is then bonded to flagstones or other **roofing** material in locations which are susceptible to leaks, i.e., at the joints between walls and **roof** on flat-roofed buildings. The foam is prepared from tolylene diisocyanate 44.6, poly(oxypropylene) triol

100, CC13F 10, silicone oil 1.5, amine catalyst (Dabco 33LV) 1, stannous octoate 0.3, and water 3.5 parts. The foam is bonded to the chlorinated polyethylene with a nitrile rubber adhesive (566-1 Heat Seal Adhesive) at 122.2° for 1 min. The assembly is bonded to the roofing material with a solution containing polychloroprene 100, MgO 4, ZnO 5, a fibrous filler 20, a resinous glue 50, and an antioxidant (Salba Special) 2 parts. A roofing material prepared as described above did not blister after prolonged use, but a similar material containing a closed-cell polyurethane foam blistered during use.

- ST chlorinated polyethylene laminates; laminates chlorinated polyethylene; polyethylene chlorinated laminates; polyurethane foam laminates; glass fibers laminates; roofing sealants; sealants roofing; nitrile rubber adhesives
- IT Urethane polymers, uses and miscellaneous  
RL: TEM (Technical or engineered material use); USES (Uses)  
(cellular, laminates with chlorinated ethylene polymers and glass fabric, for roofing materials)
- IT Roofing  
(chlorinated ethylene polymer-glass fabric-urethane polymer foam laminates for)
- IT Fiber, glass, uses and miscellaneous  
RL: USES (Uses)  
(fabric, laminates with chlorinated ethylene polymers and urethane polymer foams, for roofing materials)
- IT Resins, epoxy, uses and miscellaneous  
RL: USES (Uses)  
(roofing materials containing)
- IT 9002-88-4, uses and miscellaneous  
RL: USES (Uses)  
(chlorinated, laminates with glass fabric and urethane polymer foams, for roofing materials)

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